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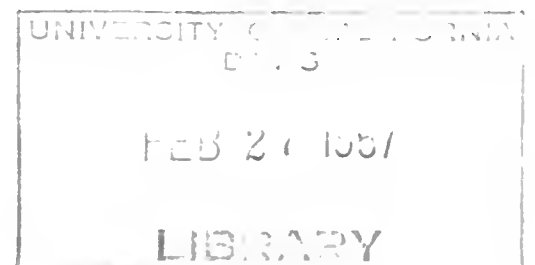
HYDROLOGIC DATA: 1965

Volume II: NORTHEASTERN CALIFORNIA

Appendix D: SURFACE WATER QUALITY

Appendix E: GROUND WATER QUALITY

DECEMBER 1966



HUGO FISHER
Administrator
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EDMUND G. BROWN
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ORGANIZATION OF BULLETIN NO. 130 SERIES

Volume I - NORTH COASTAL AREA

Volume II - NORTHEASTERN CALIFORNIA

Volume III - CENTRAL COASTAL AREA

Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

Appendix A - CLIMATE

Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY

SCALE OF MILES

40 0 40 80

- I NORTH COASTAL AREA**
- II NORTHEASTERN CALIFORNIA**
- III CENTRAL COASTAL AREA**
- IV SAN JOAQUIN VALLEY**
- V SOUTHERN CALIFORNIA**

METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT
Inch (in)	2.54 Centimeters
Foot (ft)	0.3048 Meter
Mile (mi)	1.609 Kilometers
Acre	0.405 Hectare
Square mile (sq. mi.)	2.590 Square kilometer
U. S. gallon (gal)	3.785 Liters
Acre foot (acre-ft)	1,233.5 Cubic meters
U. S. gallon per minute (gpm)	0.0631 Liters per second
Cubic feet per second (cfs)	1.7 Cubic meters per minute

BULLETIN 130-65

VOLUME II

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APPENDIX D
SURFACE WATER QUALITY

APPENDIX D: INTRODUCTION

The data presented in this appendix are measured values of selected quality characteristics that demonstrate the dissolved mineral and physical conditions of surface waters in northeastern California as shown on the "Area Orientation Map", which area lies within the jurisdictions of the Central Valley (No. 5) and Lahontan (No. 6) Regional Water Quality Control Boards. The data in this bulletin were collected during the 1964-65 water year, from October 1, 1964 through September 30, 1965.

Figure D-1, "Surface Water Quality Sampling Stations in Sacramento-San Joaquin Delta", and Figure D-2, "Surface Water Quality Sampling Stations in Northeastern California", show the locations of stations that are routinely sampled. Table D-1, "Sampling Station Data and Index", lists pertinent information about the station in addition to the page numbers on which data for each station may be found.

Field sampling was performed in accordance with accepted engineering practice. Comments on local conditions were noted in field books, which are on file in the Department's District office.

The data are collated, reviewed to note trends or significant changes, and published.

Changes in program operation during the year are the use of computers for tabulating dissolved chemical data (Table D-2), the adoption of the surface water measurement station numbering system, the inclusion of surface water temperature data (Table D-8), and discontinuing the collection of radioactivity data.

Specific Conductance

Specific conductance of water is a measure of its capacity to conduct an electric current. The conductance varies with the concentration of ionized substances in solution and with the temperature of the water. The nature of the various dissolved substances, their absolute and relative concentrations, and the ionic strength of the sample all affect the specific conductance. Observing variations in the conductance of a stream permits a good estimate of changes in dissolved mineral concentration. Specific conductance is the reciprocal of the resistance measured between two electrodes one square centimeter in cross section and one centimeter apart. All readings are referenced to 25°C automatically by the measuring instrument.

Specific conductance is recorded continuously at the following points in the Sacramento-San Joaquin Delta.

- Sacramento River at Walnut Grove (98)
- Sacramento River at Sacramento Weir
- Feather River above Verona (20a)
- San Joaquin River at Antioch Bridge
- San Joaquin River at Vernalis (27)
- Mokelumne River at Highway 12 Bridge
- Italian Slough at Clifton Court Road Bridge (106)
- Delta Mendota Canal at Tracy (93)

Hourly readings are taken from continuous records and averaged by computer to obtain average daily values. These daily averages are shown for two major Delta inflows, Sacramento River at Walnut Grove (98) and San Joaquin River at Vernalis (27) in figures D-3 and D-4. Monthly plots of the hourly values for specific conductance for the eight above listed stations are issued quarterly by the Sacramento District.

Chemical Analyses

Table D-2 lists results of monthly surface water sample analyses. These data are presented numerically by station number and are listed alphabetically in Table D-1 "Sampling Station Data and Index".

Discharge was derived from rating curves for stream gaging stations and represents instantaneous flow at time of sampling.

Temperature of the water was measured in the field at the time of sampling with a standard five-inch thermometer having divisions of one degree Fahrenheit.

Dissolved Oxygen was determined at the time of sampling by the Alsterberg (Azide) modification of the Winkler Method. Percent saturation has been corrected for altitude.

Specific Conductance was measured in the laboratory with a Wheatstone Bridge.

pH was measured both in the field, with a color comparator, and in the laboratory with a line-operated pH meter. Two values for pH are tabulated. The value on the first line is the pH in the laboratory at time of analysis and the value on the second line is the field pH.

Mineral Constituents were determined in the laboratory in accordance with U. S. Geological Survey Water Supply Paper No. 1454, "Methods for Collection and Analyses of Water Samples". Tabulated values are analytical quantities reported in milligrams per liter (mg/l), which is equivalent to parts per million (ppm), the computed values for milliequivalents (meq), and percent reactance values. The computations and tabulation are by computer processes.

Total Dissolved Solids (TDS) In May and September TDS was determined gravimetrically and by summation of constituents. At other times the "summed" value was derived by computation.

Percent Sodium is the ratio of the sodium concentration to the sum of the concentrations of the cations, all values being expressed in equivalents per million.

Hardness was determined in the laboratory by the EDTA titration method.

Total Hardness is assumed to represent the sum of the concentrations of calcium and magnesium ions, expressed as calcium carbonate.

Noncarbonate Hardness represents any excess of total hardness over total alkalinity.

Trace Metals

Trace metal analyses of surface water samples were performed with an emission spectograph by the U. S. Geological Survey, following the "Concentration Method for the Spectro-Chemical Determination of Minor Elements in Water", as published in U. S. Geological Survey Water Supply Paper 1540-B. Results are reported in parts per billion (ppb), which is equivalent to micrograms per liter, in Table D-3, "Trace Metal Analyses of Surface Water".

Miscellaneous Constituents

Table D-4 lists other constituents that have been determined during the year. Coliform samples are collected monthly at most stations and the other constituents usually are sampled only in May and September.

Coliform concentration was determined monthly by duplicate grab samples by the multitube fermentation technique. Bacteriologic determinations were made by the California Department of Public Health's mobile laboratory. Results are expressed as the most probable number (MPN) of coliform bacteria per milliliter of sample. In view of the rapidity and frequency of change in the density of coliform organisms, numerous samples are necessary before a reliable evaluation can be made.

Turbidity was measured in the laboratory with a line operated Hellige turbidimeter.

MBAS. Methylene Blue Active Substances are presented in Standard Methods as "apparent ABS". It is a measure of the detergents, ABS and LAS, present in the sample. The presence of detergents is indicative of pollution by sewage.

As and PO₄ are the analytical values for the toxic arsenic and nutrient material phosphate expressed in parts per million.

Salinity Observations

Table D-5 lists salinity sampling stations within the Sacramento-San Joaquin Delta. Locations are shown on Figure D-5, "Lines of Annual Maximum Salinity Encroachment". The salinity samples were taken, when possible, at four-day intervals, one and one-half hours after high-high tide. Concentrations are reported as chloride in parts per million. The lines on Figure D-5 show the 1,000 ppm chloride line for the 1965 water year and other years of interest. Table D-6 lists the maximum observed chlorides for stations during the 1965 water year and other historical values for these stations. Complete tabulations of salinity observations made for the 1965 water year are given in Table D-7.

The Salinity Observation program is conducted by the Department of Water Resources for the U. S. Bureau of Reclamation under an annual contract.

Temperature

Water temperature records are obtained by continuous temperature recording instruments. From these records the daily maximum and minimum temperatures are extracted and reported. Contained herein are all previously obtained water temperature data for the listed stations.

In 1956, the Department of Water Resources initiated a water temperature measurement program on the Feather River at the Joint Water District diversion. Since then the measurement program has been expanded and water temperature data are now obtained on most major streams in the report area.

Table D-8 contains tabulations of daily maximum and minimum water temperatures.

CODING

Water Quality Station Numbering System

The system for coding or numbering surface water quality sample stations incorporates the Stream Gaging Station Index Numbering System, used for surface flow measurement stations and parallels the coding system being established for hydrologic areas. The Surface Water Quality Station Identification (SQI) system adds a decimal and two digits to the Stream Gaging Station Index Number (SGSIN). SGSIN has the form A xxxxx and SQI has the form A xxxxx.xx.

SGSIN is used to designate the gage, which may be an established gage, a gage which has been removed, or a possible future gage, that establishes flow conditions for the point or reach represented by the surface water quality sample. The decimal and two digits added to designate the water quality system establishes the relationship between the location of the water quality sampling point and the control gage.

A x xxxx.00	Immediate vicinity of gage
A x xxxx.10 - (upstream)	Gage is the control but sample was taken a significant distance above the gage
A x xxxx.90 - (downstream)	Gage is the control but sample was taken a significant distance below the gage
A x xxxx.50	No gage at sample location

A significant distance above or below the gage allows water quality samples to be taken in other than the gaged reach with very minor inflows existing or possible between the quality sample location and the gage. An increasing variation of SQI from the gage station number indicates a decreasing relationship with the gage.

SGSIN establishes the Hydrographic Area, Drainage Basin, Stream or Reach, and assigned number for each gage. The State has been divided into twelve Hydrographic Areas, which are equivalent to the Hydrologic provinces of the Areal Designation Code and which have been given a unique alpha designation. Within the Hydrographic Area, separate streams or drainage basins are assigned numbers, and main reaches, similarly, are assigned individual numbers. A particular station then is assigned its own unique number.

Separate stream areas or stream groups (the first numeric digit) are numbered from north to south. Numeric designations for a major stream and its tributaries and the numbers assigned to the gages begin at the mouth and increase numerically proceeding upstream.

Other Codes

Time. The time of sampling reported is Pacific Standard Time (PST) expressed in the military style.

Agency Codes. Agency coding applies to the laboratory agency. The numeral 5000 indicates the U. S. Geological Survey laboratory in Sacramento and the numeral 5050 indicates the Department of Water Resources' laboratory at Bryte.

TABLE SUBSCRIPTS

Table subscripts or footnote symbols are either defined at the bottom of the page where they appear or are defined below. Tables using subscripts which are not defined on those pages are Table D-2, Table D-3, Table D-4, and Table D-8.

In Table D-2 the following symbols are used:

- a. Field pH
- b. Lab pH
- c. Sum of Calcium and Magnesium in epm
- f. TDS determined by summation of analyzed constituents
- i. Analyzed by: USGS and 5000 indicates the U. S. Geological Survey laboratory in Sacramento, 5050 the DWR laboratory at Bryte

The letters d, e, g, and h were not used.

ABS Methylene Blue Active Substances, detergent

As Arsenic

PO₄ Orthophosphate

In Table D-2 and D-4 the following symbols are used:

- > Greater than
- < Less than
- ≤ Equal to or less than

L.B. Left Bank

R.B. Right Bank

In Table D-8 the following symbols are used:

- * Record incomplete
- NR No Record
- e Estimated

**SURFACE WATER QUALITY
SAMPLING STATIONS
CENTRAL VALLEY REGION (NO. 5)**

Sta. No.	Station Name
11	Sacramento River at Delta
11a	Cottonwood Creek below North Fork Cottonwood Creek
11b	Cottonwood Creek, South Fork above Cottonwood Creek
12	Sacramento River at Keswick
12b	Cottonwood Creek near Cottonwood
12c	Sacramento River at Bend
12d	Clear Creek near Igo
13	Sacramento River near Hamilton City
13b	Sacramento River at Colusa
13c	Stony Creek at Black Butte Dam Site
13d	Thomes Creek at Paskenta
13e	Elder Creek near Paskenta
13f	Stony Creek near Fruto
14a	Sacramento Slough near Knights Landing
14b	Sacramento River above Colusa Trough
15a	Sacramento River at Toland Landing
15c	Sacramento River near Mallard Slough
15d	R.D. 1000 at Second Bannan Slough
15e	Sacramento River above Sacramento Slough
16	Sacramento River at Rio Vista
16a	Calaveras River at Jenny Lind
16b	Calaveras River near Stockton
16c	Calaveras River below New Hogan Dam
16d	Calaveras River above Hogan Reservoir
17	Pit River near Montgomery Creek
17a	Pit River near Canby
17d	Indian Creek near Crescent Mills
17e	Pit River near Bieber
18	McCloud River above Shasta Lake
18a	Pit River, South Fork near Likely
19	Feather River near Oroville
19a	Feather River, North Fork at Big Bar
19b	Feather River, Middle Fork near Merrimac

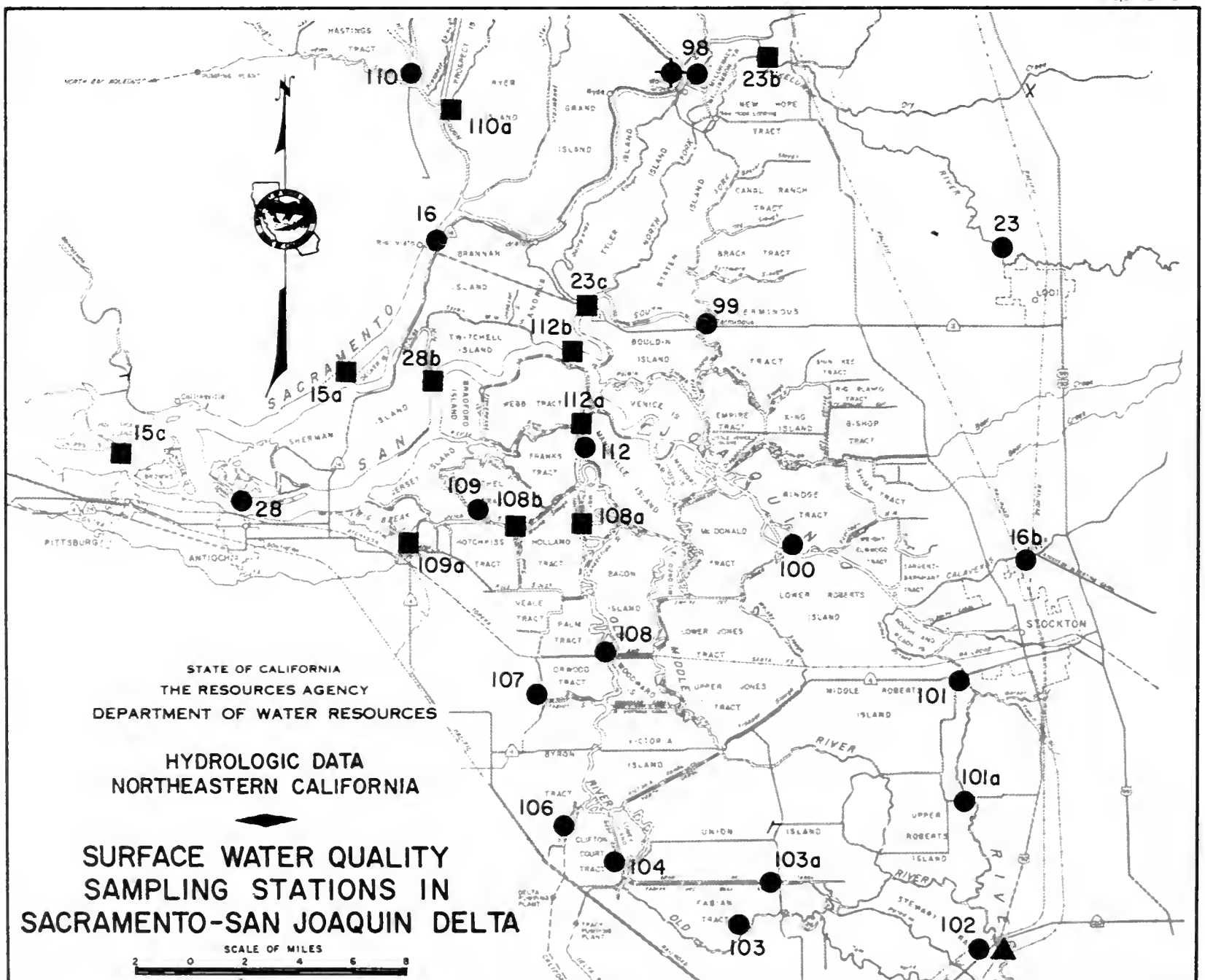
19c	Feather River, South Fork below Ponderosa Dam
20	Feather River at Nicolaus
20a	Feather River below Shanghai Bend
20c	Feather River above Verona
21	Yuba River at Marysville
21a	Yuba River near Smartville
22	American River at Sacramento
22a	American River at Nimbus Dam
22b	American River, Middle Fork near Auburn
22c	American River, South Fork near Lotus
22d	American River at Fair Oaks
23	Mokelumne River at Woodbridge
23a	Mokelumne River near Lancha Plana
23b	Mokelumne River below Cosumnes River
23c	Mokelumne River below Georgiana Slough
27	San Joaquin River near Vernalis
28	San Joaquin River at Antioch
28b	San Joaquin River at Jersey Point
41	Clear Lake at Lakeport
42	Cache Creek near Lower Lake
42a	Cache Creek at Highway 53
78	Bear River near Wheatland
79	Cache Creek, North Fork near Lower Lake
80	Cache Creek near Capay
81	Putah Creek near Winters
81a	Putah Creek at Diversion to Putah South Canal
84	Butte Creek near Chico
85	Big Chico Creek near Chico
85a	Big Chico Creek at Chico
87	Colusa Trough near Colusa
87a	Sacramento River at Butte City
88	Mill Creek near Mouth
88a	Cow Creek near Millville
88b	Battle Creek near Cottonwood
88c	Antelope Creek near Mouth
88d	Redbank Creek near Red Bluff
88e	Antelope Creek near Red Bluff
88g	Paynes Creek near Red Bluff
94a	Consumes River at McConnell
94	Consumes River near Michigan Bar

95a	Elder Creek at Gerber
95b	Thomes Creek near Mouth
97	Sacramento River at Green's Landing
98	Delta Cross Channel near Walnut Grove
99	Little Potato Slough at Terminous
100	Stockton Ship Channel on Rindge Island
101	San Joaquin River at Garwood Bridge
101a	San Joaquin River at Brandt Bridge
102	San Joaquin River at Mossdale Bridge
103	Old River near Tracy
103a	Grant Line Canal at Tracy Road Bridge
104	Old River at Clifton Court Ferry
106	Italian Slough near Mouth
107	Indian Slough near Brentwood
108	Old River at Orwood Bridge
108a	Old River at Holland Tract
108b	Dutch Slough at Farrar Park Bridge
109	Rock Slough near Knightsen
110	Lindsey Slough near Rio Vista
110a	Cache Slough below Lindsey Slough
112	Old River at Mandeville Island
112a	False River at Webb Pump
112w	San Joaquin River at San Andreas Ldg.

LAHONTAN REGION (NO. 6)

17b	Susan River at Susanville
38	Lake Tahoe at Tahoe City
52	Truckee River near Truckee
53	Truckee River near Parad
115	Carson River, East Fork near Markleeville
115a	Carson River, West Fork at Woodfords
116	Walker River, West near Coleville
116a	Walker River, East near Bridgeport

FIGURE D-1



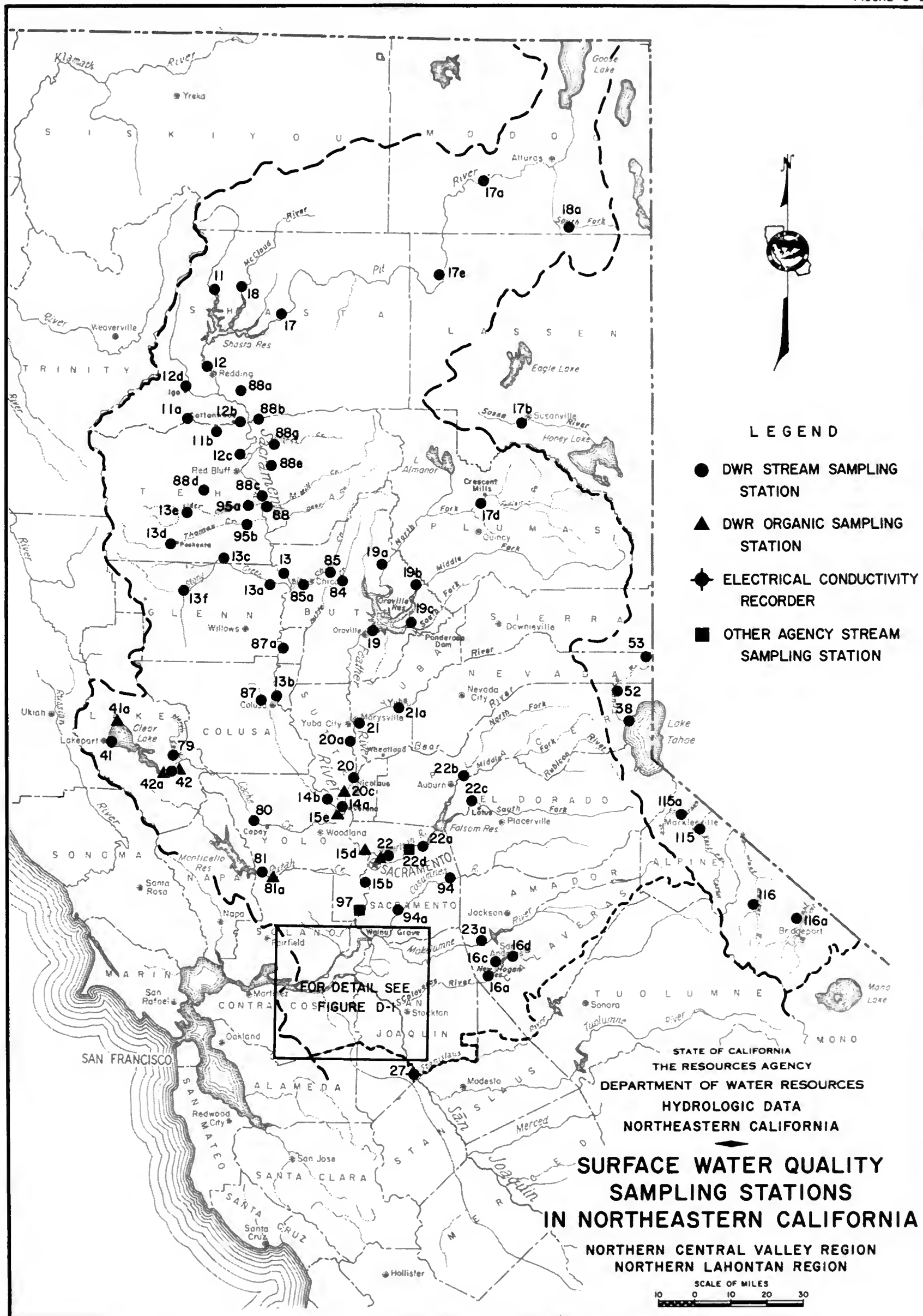
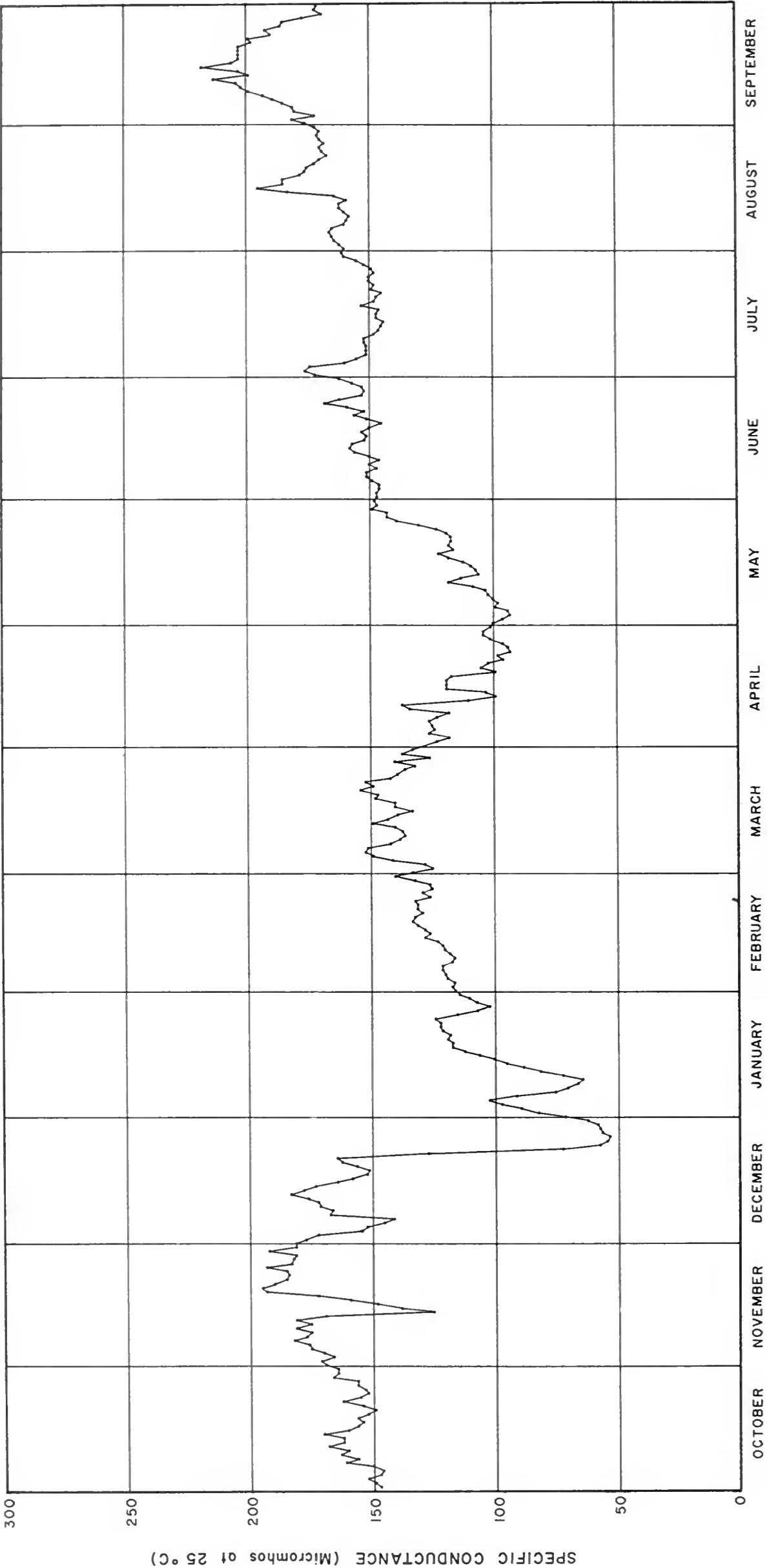


FIGURE D-3



AVERAGE DAILY SPECIFIC CONDUCTANCE - SACRAMENTO RIVER AT WALNUT GROVE (STA. 98)
OCTOBER 1964 THROUGH SEPTEMBER 1965

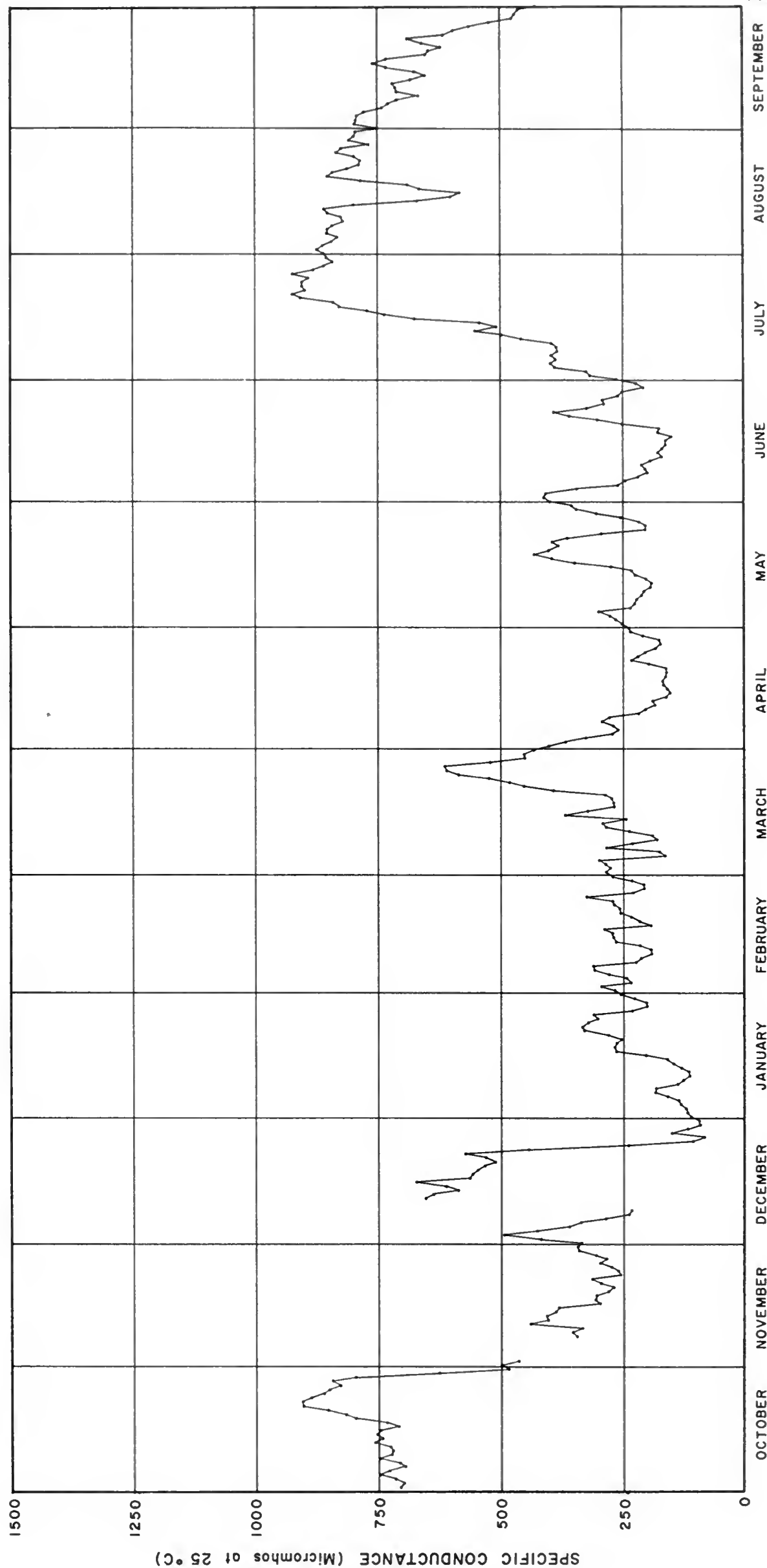


FIGURE D-4

AVERAGE DAILY SPECIFIC CONDUCTANCE - SAN JOAQUIN RIVER NEAR VERNALIS (STA. 27)

OCTOBER 1964 THROUGH SEPTEMBER 1965

TABLE D-1
SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5)

Station		Station Number	Location MDB & M	Period ^a of Record	Frequency ^b of Sampling	Sampled by	Analysis on page
American River, Middle Fork near Auburn	A7 310.00	22b	12N/9E-6	7-58	B	DWR	19, 102
American River at Nimbus Dam	A7 1110.00	22a	9N/7E-16	11-58	M	DWR	20,100,102
American River at Sacramento	A0 7140.00	22	8N/5E-3	4-51 9-62	M A	DWR DWR	21,100,102
American River, South Fork near Lotus	A7 4150.00	22c	11N/9E-11	7-58	B	DWR	22,102
Antelope Creek near Mouth		88c	26N/2W-17	10-58	M	DWR	23
Antelope Creek near Cottonwood		88e	27N/2W-8	10-58	M	DWR	24
Battle Creek near Cottonwood		88b	29N/2W-6	4-58	M	DWR	25
Bear River near Wheatland	A0 6550.00	78	13N/5E-3	12-51	M	DWR	26,100,103
Big Chico Creek at Chico		85a	22N/1E-28	1-59	M	DWR	27
Big Chico Creek near Chico		85	22N/2E-9	7-52	M	DWR	28
Butte Creek near Chico		84	22N/2E-36	7-52	M	DWR	29
Cache Creek near Capay	A8 1120.00	80	10N/2W-8	12-51	M	DWR	30,100,103
Calaveras River below Hogan Dam	B2 5300.00	16c	3N/10E-1	1-64	M	CE	31, 103
Calaveras River above Hogan Reservoir	B2 5898.50	16d	4N/11E-13	1-64	M	CE	32,104
Calaveras River at Jenny Lind	B0 2590.00	16d	3N/10E-27	4-51	M	DWR	33,104
Calaveras River near Stockton	B0 2520.00	16b	2N/6E-26	7-58	M	DWR	34,100,104
Clear Creek near Igo		12d	31N/6W-27	8-58	M	DWR	35
Colusa Trough near Colusa		87	16N/2W-35	7-62	M	DWR	36
Cosumnes River at McConnell	B0 1125.00	94a	6N/6E-20	7-58	B	DWR	37,100,104
Cosumnes River at Michigan Bar	B1 1150.00	94	8N/8E-36	7-52	B	DWR	38,100,105
Cottonwood Creek near Cottonwood		12b	29N/3W-7	4-51	M	DWR	39
Cottonwood Creek below North Fork Cottonwood Creek		11a	29N/6W-2	8-58	M	DWR	40
Cottonwood Creek, South Fork above Cottonwood Creek		11b	29N/4W-17	11-58	M	DWR	41
Cow Creek near Millville		88a	31N/3W-32	8-58	M	DWR	42
Delta Cross Channel near Walnut Grove	B9 1700.00	98	5N/4E-35	9-52	M	DWR	43,100,105
Elder Creek at Gerber		95a	25N/3W-2	1-59	M	DWR	44
Elder Creek near Paskenta		13a	25N/6W-14	10-58	M	DWR	45
Feather River, Middle Fork near Merrimac	A5 5100.00	19b	21N/6E-2	7-63	M	DWR	46, 105
Feather River at Nicolaus	A0 5103.00	20	12N/3E-12	4-51	M	DWR	47,100,105
Feather River, North Fork at Big Bar	A5 3140.00	19a	23N/5E-32	7-63	M	DWR	48,106
Feather River near Oroville	A5 1140.00	19	19N/4E-2	4-51	M	DWR	49,100,106
Feather River below Shanghai Bend	A0 5120.00	20a	14N/3E-11	7-58	M	DWR	50,106
Feather River at Sutter Butte Canal, near Gridley			19N/3E-33	7-56	Continuous	DWR	125
Feather River, South Fork below Ponderosa Dam	A5 6080.00	19c	20N/6E-33	7-56	M	DWR	51,107
Feather River, West Branch, near Yankee Hill	A5 2100.00	19d		10-64	M	DWR	52,107
Feather River, at Yuba City	A0 5135.00		15N/3E-23	7-64	Continuous	DWR	135
Grant Line Canal at Tracy Road Bridge	B9 5300.00	103a	1S/5E-29	7-58	M	DWR	53,107
Indian Creek near Crescent Mills	A5 4320.00	17d	26N/9E-25	4-51	B	DWR	54,107
Indian Slough near Brentwood	B9 5241.20	107	1N/3E-23	9-52	M	DWR	55,108

^a Beginning of record

^b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE D-1
SAMPLING STATION DATA AND INDEX
CENTRAL VALLEY REGION (NO. 5)

Station		Station Number	Location MDB & M	Period of Record ^a	Frequency of Sampling ^b	Sampled by	Analysis on page
Italian Slough, at Mouth, near Byron	B9 5270.20	106	1S/4E-7	9-52	M	DWR	56,108
Little Potato Slough at Terminus	B9 4120.10	99	3N/4E-13	9-52	B	DWR	57,108
McCloud River above Shasta Lake		18	36N/3W-31	4-51	M	DWR	58
Mill Creek near Mouth		88	25N/2W-9	7-52	M	DWR	58
Mokelumne River below Camanche Dam	B2 1170.00	23a	4N/10E-4	4-51	B	DWR	60,108
Mokelumne River at Woodbridge	B9 4300.00	23	4N/6E-34	4-51	B	DWR	61,100,109
Old River at Clifton Court Ferry	B9 5340.00	104	1S/4E-20	9-52	M	DWR	62,109,134
Old River at Mandeville Island	B9 5110.20	112	2N/4E-6	12-54	M	DWR	63,100,109
Old River at Orwood Bridge	B9 5320.20	108	1N/4E-17	9-52	M	DWR	64,109
Old River near Tracy	B9 5380.00	103	2S/5E-6	10-52	M	DWR	65,110
Paynes Creek near Red Bluff		88g	28N/2W-3	10-58	M	DWR	66
Pit River near Canby		17a	41N/9E-10	4-51	M	DWR	67,100
Pit River near Montgomery Creek		17	35N/1E-32	4-51	M	DWR	68
Pit River, South Fork near Likely		18a	39N/13E-11	8-58	M	DWR	69
Red Bank Creek near Red Bluff		88d	26N/5W-22	1-59	M	DWR	70
Rock Slough near Knightsen	B9 5220.00	109	2N/3E-33	9-52	M	DWR	71,110
Sacramento River at Bend		12c	28N/3W-20	5-55	M	DWR	72,100
Sacramento River at Butte City		87a	19N/1W-32	5-55	M	DWR	73
Sacramento River at Colusa		13a	19N/1W-32	10-58	M	DWR	74,100
Sacramento River above Colusa Trough		14b	11N/2E-14	7-60	M	DWR	75,100
Sacramento River at Delta		11	36N/5W-35	4-51	M	DWR	76
Sacramento River at Freeport	B9 1850.00	15b	7N/4E-14	6-60	M	DWR	77,100,110
Sacramento River at Fremont Weir	A0 2170		1N/3E-32	6-65		DWR	139
Sacramento River near Hamilton City		13	22N/1W-20	4-51	M	DWR	78,100
Sacramento River at Keswick		12	32N/5W-28	4-51	M	DWR	79,101
Sacramento River near Mount Shasta	A2 1600.00		40N/4W-33	5-65	Continuous	DWR	140
Sacramento River at Rio Vista	B9 1210.00	16	4N/3E-30	4-51	M	DWR	80,101,111
Sacramento River at Sacramento Weir	A0 2105		9N/4E-29	11-64		DWR	141
Sacramento River at Walnut Grove			5N/4E-35	12-60	Continuous	DWR	14,142
Sacramento Slough near Knights Landing		14a	11N/3E-21	6-51	M	DWR	81
San Joaquin River at Antioch	B9 5020	28	2N/2E-18	4-51	M	DWR	82,101,111
San Joaquin River at Garwood Bridge	B9 5710.00	101	1N/6E-16	9-52	M	DWR	83, 112
San Joaquin River at Mossdale	B9 5820.00	102	2N/6E-4	9-52	M	DWR	84,112
San Joaquin River near Vernalis		27	3S/6E-13	12-61	Continuous	DWR	15
Stockton Ship Channel on Rindge Island	B9 5620.00	100	2N/5E-28	9-52	M	DWR	85,112,144
Stony Creek below Black Butte Dam		13c	23N/4W-28	8-57	M	DWR	86,104
Stony Creek near Fruto		13f	21N/6W-15	10-60 to 2-64 3-64	M M	USGS DWR	87
Thomes Creek near Mouth		95b	25N/3W-35	1-59	M	DWR	88
Thomas Creek near Paskenta		13d	23N/6W-4	10-58	M	DWR	89

^a Beginning of record

^b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE D-1
SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO.5)

Station		Station Number	Location MDB & M	Period of Record ^a	Frequency of Sampling ^b	Sampled by	Analysis on page
Yuba River at Marysville	A0 6120.00	21	15N/4E-18	4-51	B	DWR	90,101,112
Yuba River near Smartville	A6 1100.00	21a	16N/6E-20	4-51	B	DWR	91,113
LAHONTIAN REGION (NO. 6)							
Carson River, East Fork near Markleeville	G8 3420.00	115	10N/20E-27	9-58	B	DWR	92,114
Carson River, West Fork at Woodfords	G8 2300.00	115a	11N/19E-34	8-58	B	DWR	93,114
Lake Tahoe at Tahoe	G7 1710.00	38	15N/17E-7	4-51	B	DWR	94, 101, 114
Susan River at Susanville		17b	30N/12E-31	4-51	M	DWR	95
Truckee River near Truckee	G7 1600.00	52	17N/16E-28	4-51	B	DWR	97, 114
Truckee River near Farad	G7 1195.00	53	18N/17E-12	4-51	M	DWR	96, 101, 114
Walker River, East near Bridgeport	G9 3200.00	116a	6N/25E-34	8-58	B	DWR	98, 115
Walker River, West near Coleville	G9 2400.00	116	6N/23E-9	8-58	B	DWR	99, 115

a Beginning of record

b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE 0-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. 0	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER									
						MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIEQUIVALENT PER LITER					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH						
A73100.00 11/12/64 5000 0945	5.45 150	11.0 101	51.0F	7.3 7.3	A73100.00 92	AMERICAN RIVER, MIDDLE FORK, NEAR AUBURN (22b)										--	.0	--	--	34 10					
A73100.00 01/14/65 5000 0945	10.13 4480	12.3 105	46.0F	7.8 7.1	64	--	--	3.3 .14	--	0.0 .00	29 .48	--	2.0 .06	--	.0	--	--	26 2							
A73100.00 03/15/65 5000 1300	7.93 2000	11.8 111	53.0F	7.7 7.3	61	--	--	2.4 .10	--	0.0 .00	28 .46	--	1.3 .04	--	.0	--	--	23 0							
A73100.00 05/14/65 5000 1215	9.40e	11.1 112	59.0F	7.3 7.3	42	5.0 .25 61	0.9 .07 17	1.8 .08 20	0.2 .01 2	0.0 .00	21 .34 85	2.0 .04 10	0.8 .02 5	0.3 .00	.0	12	38 33	16 0							
A73100.00 07/13/65 5000 0805	6.95	8.6 97	69.0F	8.1 7.7	90	--	--	3.5 .15	--	0.0 .00	40 .66	--	2.7 .08	--	.0	--	--	34 1							
A73100.00 09/02/65 5000 0745	6.33	8.3 96	71.0F	7.9 7.7	123	15 .75 64	2.8 .23 19	3.2 .14 12	2.5 .06 5	0.0 .00	60 .98 82	6.0 .12 10	3.3 .09 8	0.2 .00	.0	12	77 74	60 11							

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH FLD	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						MINERAL ANALYSIS OF SURFACE WATER										MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH	NCH
A71110.00 10/06/64 1230	1.72 1470	8.6 95	69.0F	7.6 7.1	56	A71110.00	0.00	AMERICAN RIVER AT	NIMBUS DAM (22a)											
A71110.00 11/12/64 0845	7.50 15380	8.5 80	55.0F	7.3 7.1	62	--	--	2.8 .12	--	0.0 .00	27 .44	--	1.4 .04	--	--	.0	--	--	22 0	
A71110.00 12/15/64 0815		9.4 84	51.0F	7.8 7.1	74	--	--	3.4 .15	--	0.0 .00	28 .46	--	1.6 .05	--	--	.0	--	--	24 1	
A71110.00 01/06/65 0815		13.7 120	50.0F	7.4 7.1	57	--	--	3.1 .13	--	0.0 .00	32 .52	--	2.8 .08	--	--	.0	--	--	28 2	
A71110.00 02/01/65 1315		12.7 108	47.0F	7.6 7.1	59	--	--	2.6 .11	--	0.0 .00	25 .41	--	0.8 .02	--	--	.1	--	--	22 2	
A71110.00 03/01/65 1500	4.35 5960	11.8 106	51.0F	7.8 7.2	60	--	--	2.5 .11	--	0.0 .00	27 .44	--	1.3 .04	--	--	.0	--	--	23 1	
A71110.00 04/13/65 1000	3.20 3580	11.4 105	53.0F	7.5 7.1	64	--	--	2.4 .10	--	0.0 .00	28 .46	--	1.3 .04	--	--	.0	--	--	24 1	
A71110.00 05/05/65 0730	5.27 8176	12.2 111	52.0F	7.4 7.1	61	6.6 .33 55	1.8 .15 25	2.2 .10 17	0.9 .02 3	0.0 .00	28 .46 78	3.0 .06 10	1.3 .04 7	2.1 .03 5	--	.0	13	47 45	24 1	
A71110.00 06/14/65 1230	3.61 4360	10.0 103	63.0F	7.9 7.1	73	--	--	3.0 .13	--	0.0 .00	30 .49	--	4.5 .13	--	--	.1	--	--	28 4	
A71110.00 07/13/65 0950	3.30 3760	9.8 98	60.0F	7.7 7.1	52	--	--	2.6 .11	--	0.0 .00	24 .39	--	1.7 .05	--	--	.0	--	--	18 0	
A71110.00 08/09/65 1215	3.46 4060	9.0 97	67.0F	7.8 7.1	50	--	--	2.2 .10	--	0.0 .00	23 .38	--	1.5 .04	--	--	.0	--	--	19 0	
A71110.00 09/15/65 0730	8.27 3710	8.5 92	67.0F	7.2 7.1	50	6.8 .34 67	0.6 .05 10	2.0 .09 18	1.1 .03 6	0.0 .00	23 .38 84	2.0 .04 9	1.0 .03 7	0.0 .00	--	.0	11	40 36	20 1	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER								
						PERCENT REACTANCE VALUE						TDS								
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH NCH	
A07140.00 10/06/64 5000 1330	17.71	9.5 105	69.0F	7.7 7.3	61	A07140.00 AMERICAN RIVER AT SACRAMENTO (P2)														
						--	--	2.9 .13	--	0.0 .00	27 .44	--	--	1.6 .05	--	.0	--	--	24 2	
A07140.00 11/12/64 5000 0800	17.47	9.7 91	55.0F	7.4 7.1	65	--	--	3.1 .13	--	0.0 .00	27 .44	--	--	2.0 .06	--	.0	--	--	24 2	
A07140.00 12/07/64 5000 1400	17.36	10.2 95	54.0F	7.7 7.1	78	--	--	3.8 .17	--	0.0 .00	31 .51	--	--	3.1 .09	--	.1	--	--	28 3	
A07140.00 01/06/65 5000 1615	33.68	12.6 111	50.0F	7.2 7.1	56	--	--	2.3 .10	--	0.0 .00	25 .41	--	--	0.8 .02	--	.1	--	--	21 1	
A07140.00 02/01/65 5000 1415	24.88	12.0 102	47.0F	7.7 7.1	59	--	--	2.3 .10	--	0.0 .00	26 .43	--	--	1.5 .04	--	.0	--	--	24 3	
A07140.00 03/03/65 5000 0745	20.06	11.5 92	43.0F	7.8 7.1	60	--	--	2.4 .10	--	0.0 .00	27 .44	--	--	1.4 .04	--	.0	--	--	24 2	
A07140.00 04/05/65 5000 1600	18.84	11.6 107	53.0F	7.6 7.3	62	--	--	2.7 .12	--	0.0 .00	28 .46	--	--	1.6 .05	--	.0	--	--	24 1	
A07140.00 05/05/65 5000 0830	21.23	11.2 103	53.0F	7.5 7.1	62	7.2 .36 60	1.5 .12 20	2.3 .10 17	0.9 .02 3	0.0 .00	28 .46 78	3.0 .06 10	1.7 .03 5	1.3 .04 7	--	.0	14	46 46	24 1	
A07140.00 06/16/65 5000 1515	17.80	9.8 102	64.0F	7.8 7.1	55	--	--	2.6 .11	--	0.0 .00	25 .41	--	--	1.3 .04	--	.0	--	--	21 1	
A07140.00 07/13/65 5000 1510	18.73	10.1 107	65.0F	7.8 7.3	49	--	--	2.8 .12	--	0.0 .00	22 .36	--	--	1.1 .03	--	.2	--	--	18 0	
A07140.00 08/09/65 5000 1315	18.94	9.6 107	70.0F	7.7 7.3	48	--	--	2.9 .13	--	0.0 .00	22 .36	--	--	1.0 .03	--	.0	--	--	18 0	
A07140.00 09/15/65 5000 0845		8.6 93	67.0F	7.2 7.1	52	7.4 .37 74	0.2 .02 4	2.1 .09 18	0.9 .02 4	0.0 .00	24 .39 80	3.0 .06 12	0.6 .01 2	1.2 .03 6	--	.0	11	40 38	20 1	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME		G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
							MINEFAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HC03	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
A74150.00 11/12/64 5000 1115		4.45 195	11.4 107	53.0F	7.4 7.3	118	A74150.00	--	6.7 .29	--	0.0 .00	49 .80	--	4.4 .12	--	--	.1	--	--	49 9	
A74150.00 01/12/65 5000 1115		7.93 3460	11.8 101	46.0F	7.6 7.0	41	--	--	2.4 .10	--	0.0 .00	19 .31	--	1.1 .03	--	--	.1	--	--	16 1	
A74150.00 03/15/65 5000 1115		6.67 1710	12.7 112	48.0F	7.5 7.3	38	--	--	2.3 .10	--	0.0 .00	18 .30	--	1.2 .03	--	--	.0	--	--	13 0	
A74150.00 05/14/65 5000 1330			11.3 113	58.0F	7.1 7.3	28	3.2 .16 59	0.4 .03 11	1.8 .08 30	0.1 .00	0.0 .00	13 .21 84	1.0 .02 8	0.7 .02 8	0.3 .00	--	.0	10	25 24	10 0	
A74150.00 07/01/65 5000 1415			10.0 108	65.0F	7.5 7.1	27	--	--	1.9 .08	--	0.0 .00	13 .21	--	0.7 .02	--	--	.2	--	--	9 0	
A74150.00 09/02/65 5000 0900		5.46 631	9.8 102	62.0F	7.2 6.9	30	3.4 .17 55	0.1 .01 3	2.6 .11 35	0.6 .02 6	0.0 .00	14 .23 82	1.0 .02 7	1.0 .03 11	0.3 .00	--	.0	7.5	29 23	9 0	

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
ANTELOPE CREEK NEAR MOUTH (STA. 88c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sediment	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
10/7/64 1530	15	70	8.4	95	258	7.6 8.0	1.62 ^c		19. 0.83		0 0.00	102 1.67		21. 0.59			0.6			2	0	81	34																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ANTELOPE CREEK NEAR RED BLUFF (STA. 88c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/mi	Analyzed by ⁱ	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/7/64 1745	34	69	10.6	118	168	8.4 8.3	1.24 ^c		12. 0.52		2 0.07	86 1.41		8.4 0.24			0.1			62	0	1		USGS
11/13 0935	214	47	11.5	99	98	7.3 8.0	0.76 ^c		5.6 0.24		0 0.00	47 0.77		2.8 0.08			0.1			38	0	1		
12/9 1600	58	50	10.2	91	148	7.7 8.2	1.09 ^c		9.5 0.41		0 0.00	78 1.28		5.4 0.15			0.2			54	0	1		
1/14/65 1140	258	44	10.8	89	80	7.4 8.0	0.61 ^c		4.5 0.20		0 0.00	43 0.70		1.8 0.05			0.0			30	0	5		
2/4 1650	154	45	10.4	87	91	7.3 8.0	0.68 ^c		5.1 0.22		0 0.00	48 0.79		2.6 0.07			0.0			34	0	3		
3/4 1650	102	50	11.0	98	110	7.6 8.2	0.82 ^c		6.0 0.26		0 0.00	61 1.00		3.3 0.09			0.0			41	0	1		
4/8 1700	439	51	8.8	79	78	7.2 7.6	0.66 ^c		3.5 0.15		0 0.00	42 0.69		1.1 0.03			0.0			33	0	5		
5/6 0945	173	50	10.6	95	81	7.2 7.5	0.88 0.44	1.9 0.16	4.4 0.19	0.9 0.02	0 0.00	44 0.72	2.0 0.04	2.2 0.06	1.1 0.02		0.0	28. PO ₄	ABS 0.0 AS 0.00 0.05	61 ^f	0	4		
6/2 1210	118	62	8.6	89	107	8.1 8.5	0.80 ^c		6.5 0.28		3 0.10	53 0.87		3.9 0.11			0.0			40	0	2		
7/12 1430	41	78	9.6	117	142	8.4 8.2	1.00 ^c		11. 0.48		0 0.00	75 1.23		7.2 0.20			0.0			50	0	1		
8/9 1405	40	80	10.3	128	150	8.4 8.1	1.06 ^c		10. 0.44		3 0.10	75 1.23		7.9 0.22			0.1			53	0	1		
9/13 1100	39	69	10.8	120	153	8.3 8.2	1.2. 0.60	6.1 0.50	10. 0.44	1.1 0.03	0 0.00	80 1.31	0.0 0.00	7.6 0.21	0.0 0.00		0.1	34. PO ₄	ABS 0.0 AS 0.00 0.07	113 ^f	0	1		

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
BATTLE CREEK NEAR COTTONWOOD (STA. 88b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sediment in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by					
			equivalents per million																				
			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents		
10/8/64 0825	271	58	10.0	98	153	7.7 8.1	1.16	8.1 0.35			0 0.00	88 1.44		1.2 0.05		0.0			58	0	1		USGS
11/9 1415	2100	52	10.7	98	80	7.2 7.3	0.56	4.4 0.19			0 0.00	28 0.46		2.1 0.06		0.1			28	5	40		
12/10 1015	356	50	9.6	86	132	7.4 8.0	0.96	7.1 0.31			0 0.00	74 1.21		1.4 0.04		0.0			48	0	3		
1/14/65 1445	806	47	10.3	88	98	7.3 8.2	0.76	5.3 0.23			0 0.00	54 0.89		1.1 0.03		0.0			38	0	5		
2/1 1430	664	48	10.4	91	106	7.3 8.2	0.80	5.8 0.25			0 0.00	60 0.98		1.0 0.03		0.0			40	0	4		
3/1 1330	532	50	10.2	91	113	7.8 8.5	0.86	5.7 0.25			4 0.13	57 0.93		1.0 0.03		0.0			43	0	1		
4/5 1420	537	53	9.3	86	115	7.7 7.9	0.90	6.2 0.27			0 0.00	66 1.08		1.3 0.04		0.0			45	0	5		
5/6 1310	658	52	9.5	87	99	7.7 8.0	0.48	5.3 0.23	2.1 0.05	0 0.00	54 0.89	1.0 0.02	1.1 0.03	1.4 0.02	ABS PO ₄	0.0 0.10	0.00	82 ^f	39	0	3		
6/14 1020	505	57	8.2	80	107	7.6 8.6	0.82	5.8 0.25		4 0.13	52 0.85		1.2 0.03		0.0			23	41	0	6		
7/12 1610	380	67	8.6	94	123	7.9 8.2	0.92	7.1 0.31		0 0.00	72 1.18		1.3 0.04		0.0			25	46	0	1		
8/13 0745	307	61	9.6	98	130	7.5 8.3	1.02	7.4 0.32		1 0.03	72 1.18		1.7 0.05		0.0			24	51	0	5		
9/13 1315	284	59	10.3	102	142	7.6 8.1	0.44	8.3 0.36	2.0 0.05	0 0.00	84 1.38	3.0 0.06	2.0 0.06	0.2 0.00	ABS PO ₄	0.0 0.08	0.00	124 ^f	54	0	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. C	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						WHEATLAND (78)														
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
A06550.00 10/09/64 5000 0745	Ponded	7.4 77	64.0F	8.2 7.3	269	A06550.00	--	6.6 .29	--	0.0 .00	124 2.03	--	6.8 .19	--	--	.0	--	--	--	126 25
A06550.00 11/13/64 5000 0845	2.38	10.0 91	52.0F	8.0 7.3	197	--	--	5.3 .23	--	0.0 .00	92 1.51	--	4.8 .14	--	--	.1	--	--	--	84 9
A06550.00 12/11/64 5000 0845	1.88	9.2 87	55.0F	8.3 7.4	326	--	--	7.0 .30	--	2.0 .07	124 2.03	--	7.9 .22	--	--	.0	--	--	--	140 35
A06550.00 01/08/65 5000 0900	7.48	12.2 103	47.0F	7.5 7.3	70	--	--	2.3 .10	--	0.0 .00	27 .44	--	1.2 .03	--	--	.0	--	--	--	28 6
A06550.00 02/05/65 5000 0830	4.19	11.7 101	48.0F	7.6 7.1	65	--	--	2.3 .10	--	0.0 .00	26 .43	--	1.3 .04	--	--	.0	--	--	--	26 5
A06550.00 03/05/65 5000 0900	3.84	11.5 106	53.0F	7.8 7.3	69	--	--	2.5 .11	--	0.0 .00	28 .46	--	1.7 .05	--	--	.0	--	--	--	28 5
A06550.00 04/13/65 5000 0845	4.37	11.3 97	48.0F	7.7 7.3	77	--	--	2.7 .12	--	0.0 .00	30 .49	--	2.0 .06	--	--	.0	--	--	--	30 6
A06550.00 05/07/65 5000 0815	2.22	11.1 103	54.0F	7.8 7.3	100	9.6 .48 47	4.9 .40 39	3.3 .14 14	0.5 .01 1	0.0 .00	42 .69 70	11 .23 23	2.6 .07 7	0.2 .00	--	.0	12	62 65	44 10	
A06550.00 06/18/65 5000 1530	1.98	10.0 117	75.0F	8.5 7.5	170	--	--	4.9 .21	--	2.0 .07	70 1.15	--	4.8 .14	--	--	.0	--	--	--	80 19
A06550.00 07/16/65 5000 1430	1.85	8.2 122	91.0F	8.3 8.1	242	--	--	5.6 .24	--	2.0 .07	102 1.67	--	6.6 .19	--	--	.0	--	--	--	111 24
A06550.00 08/13/65 5000 0745	1.96	7.5 87	74.0F	8.3 7.3	181	--	--	4.8 .21	--	1.0 .03	78 1.28	--	4.3 .12	--	--	.0	--	--	--	80 15
A06550.00 09/17/65 5000 0815	1.86	8.0 83	63.0F	7.8 7.5	281	32 1.60 57	9.2 .76 27	10 .44 16	0.6 .02 1	0.0 .00	117 1.92 67	27 .56 20	14 .39 14	0.0 .00	--	.0	24	180 174	118 22	

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK AT CHICO (STA. 85a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i				
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents			
10/5/64 1740		71	8.0	91	236	7.7 8.1	15.2 0.65	1.56 ^c				0 0.00	118 1.93		13.2 0.37		0.2				29	78	0	1			USGS
11/12 1150		52	10.5	96	134	7.9	8.1 0.35	0.96 ^c				0 0.00	62 1.02		5.8 0.16		0.1				27	48	0	2			
12/10 0845		51	10.6	96	167	7.4 8.0	10.2 0.44	1.18 ^c				0 0.00	84 1.38		7.2 0.20		0.1				27	59	0	1			
1/13/65 1540		48	11.3	98	93	7.4 8.0	4.9 0.21	0.73 ^c				0 0.00	48 0.79		2.2 0.06		0.0				22	36	0	2			
2/2 1225		48	10.7	93	112	7.3 8.0	5.9 0.26	0.88 ^c				0 0.00	59 0.97		2.9 0.08		0.1				23	44	0	1			
3/2 0830		48	10.7	93	133	7.3 8.0	7.2 0.31	1.04 ^c				0 0.00	70 1.15		4.6 0.13		0.0				23	52	0	2			
4/5 1445		54	10.5	98	130	7.8 8.1	8.4 0.37	1.00 ^c				0 0.00	69 1.13		3.9 0.11		0.1				27	50	0	5			
5/3 1345		57	10.4	101	119	7.8 7.9	4.7 0.39	1.1 0.55		0.4 0.01		0 0.00	65 1.07	1.0 0.02	3.3 0.09		0.8 0.01	0.1	32	ABS 0.0 As 0.00 PO ₄ 0.00	21	47	0	3			
6/16 1430		67	9.3	101	174	7.8 8.4	11.2 0.48	1.32 ^c				1 0.03	88 1.44		7.2 0.20		0.1				27	66	0	1			
7/14 1345		77	9.9	119	198	8.2 8.5	13.2 0.57	1.46 ^c				3 0.10	97 1.59		8.9 0.25		0.1				28	73	0	13			
8/12 1010		71	8.7	99	207	7.7 8.1	15.2 0.65	1.48 ^c				0 0.00	105 1.72		11.2 0.31		0.0				31	74	0	2			
9/15 1450		71	10.0	114	209	8.1 8.2	8.6 0.71	1.7 0.85		0.9 0.02		0 0.00	110 1.80	5.0 0.10	10.2 0.28		0.2	36	ABS 0.0 As 0.00 PO ₄ 0.06	28	78	0	1				

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK NEAR CHICO (STA. 85)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH at 25°C	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/6/64 0825	20	65	9.4	100	225	8.0 8.3	1.60 ^c		15. 0.65			2 0.07	110 1.80		12. 0.34			0.2			80	0	1	Median 1450	USGS
11/12 1100	300	50	11.3	101	96	7.5 7.5	0.70 ^c	5.2 0.23				0 0.00	46 0.75		3.0 0.08			0.1			35	0	2	Maximum 2400	
12/9 1550	66	50	11.3	101	163	7.6 8.1	1.20 ^c	10. 0.44				0 0.00	82 1.34		7.4 0.21			0.1			60	0	1	Minimum 12.	
1/13/65 1315	435	41	11.9	94	77	7.5 8.0	0.62 ^c	3.8 0.17				0 0.00	40 0.66		1.6 0.05			0.1			31	0	2		
2/2 1440	208	46	11.8	100	96	7.3 7.9	0.76 ^c	5.0 0.22				0 0.00	50 0.82		2.1 0.06			0.1			38	0	1		
3/1 1430	106	49	11.4	100	123	7.1 8.0	0.98 ^c	6.0 0.26				0 0.00	66 1.08		3.8 0.11			0.0			49	0	2		
4/5 1520	97	52	11.0	100	128	8.0 8.1	1.00 ^c	7.7 0.33				0 0.00	68 1.11		3.9 0.11			0.1			50	0	3		
5/3 1445	134	54	10.7	100	118	7.7 7.8	11. 0.55	6.0 0.26	4.7 0.39		0.4 0.01	0 0.00	65 1.07	1.0 0.02	2.8 0.08	1.3 0.02	ABS 0.0 As PO ₄ 0.00	0.0	32. PO ₄ 0.00	87 ^f	47	0	3		
6/16 1615	41	64	9.4	99	171	8.0 8.5	1.32 ^c	10. 0.44				4 0.13	82 1.34		6.6 0.19			0.0			66	0	1		
7/14 1600	29	72	8.4	96	190	8.1 8.4	1.40 ^c	12. 0.52				2 0.07	25 1.56		8.1 0.23			0.1			70	0	1		
8/12 0900	61	68	9.5	105	193	8.0 8.4	1.44 ^c	12. 0.52				4 0.13	92 1.51		8.2 0.23			0.0			72	0	1		
9/16 0730	25	65	9.1	97	201	7.9 8.2	16. 0.80	14. 0.61	8.3 0.68		1.1 0.03	0 0.00	106 1.74	5.0 0.10	10. 0.28	0.1 0.00	ABS 0.0 As PO ₄ 0.09	0.1	38. PO ₄ 0.09	138 ^f	74	0	1		

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
BUTTE CREEK NEAR CHICO (STA. 84)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/6/64 0740	115	58	9.7	95	111	1.00 ^c		3.7 0.16			0 0.00	67 1.10	0.5 0.01			0.0		50	0	1		USGS		
11/12 1015	528	47	11.4	98	93	0.80 ^c		4.4 0.19			0 0.00	54 0.89	0.6 0.02			0.0		40	0	30				
12/9 1505	210	48	11.6	101	103	0.90 ^c		4.1 0.18			0 0.00	61 1.00	0.6 0.02			0.0		45	0	3				
1/14/65 0900	1060	44	11.9	98	65	0.57 ^c		3.0 0.13			0 0.00	36 0.59	0.8 0.02			0.0		28	0	10				
2/2 1330	762	45	11.7	98	68	0.57 ^c		2.6 0.11			0 0.00	37 0.61	0.4 0.01			0.0		28	0	2				
3/1 1335	494	48	10.8	94	73	0.63 ^c		2.6 0.11			0 0.00	40 0.66	0.9 0.03			0.0		32	0	2				
4/5 1600	501	51	10.9	98	73	0.64 ^c		2.9 0.13			0 0.00	41 0.67	0.4 0.01			0.0		32	0	2				
5/3 1530	676	52	10.8	99	66	1.2 0.36	2.4 0.20	2.4 0.10	0.4 0.01	0 0.00	0 0.00	37 0.61	0.8 0.02	2.1 0.03	ABS 0.0 As 0.00 PO ₄ 0.00	0.0	21	28	0	11				
6/16 1515	930	61	9.5	97	82	0.71 ^c		3.1 0.13		2 0.07	0 0.00	43 0.70	0.6 0.02			0.0		36	0	10				
7/14 1500	198	70	8.6	97	95	0.82 ^c		3.7 0.16		0 0.00	0 0.00	55 0.90	0.3 0.01			0.0		41	0	1				
8/12 0800	335	64	9.2	97	105	0.92 ^c		4.6 0.20		0 0.00	0 0.00	60 0.98	0.8 0.02			0.0		46	0	9				
9/15 1550	143	64	9.8	103	104	1.2 0.60	3.9 0.32	3.5 0.15	0.5 0.01	1 0.03	0 0.00	62 1.02	0.6 0.02	0.1 0.00	ABS 0.0 As 0.00 PO ₄ 0.06	0.0	21	46	0	1				

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CREEK NEAR CAPAY (80)														
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
A81120.00 10/07/64 5000 1345	1.11 12	6.3 72	71.0F	8.6 8.1	701	--	--	52 2.26	--	16 .53	264 4.33	--	72 2.03	--	--	1.9	--	424	244 1	
A81120.00 11/10/64 5000 0935	3.54 429	9.4 88	54.0F	8.4 8.3	1210	--	--	144 6.26	--	10 .33	288 4.72	--	215 6.06	--	--	4.7	--	726	274 22	
A81120.00 12/08/64 5000 1445	1.98 84	11.4 110	56.0F	8.6 8.1	733	--	--	66 2.87	--	13 .43	225 3.69	--	98 2.76	--	--	4.8	--	--	219 13	
A81120.00 01/04/65 5000 0930	8.66 5100	11.2 97	48.0F	8.2 8.1	294	--	--	15 .65	--	0.0 .00	150 2.46	--	11 .31	--	--	.7	--	--	122 0	
A81120.00 02/02/65 5000 0915	5.87 1750	10.7 94	49.0F	8.2 8.1	360	--	--	19 .83	--	0.0 .00	188 3.08	--	15 .42	--	--	1.0	--	--	152 0	
A81120.00 03/02/65 5000 0915	3.27 346	11.0 101	52.0F	8.5 8.3	667	--	--	47 2.04	--	15 .50	255 4.18	--	60 1.69	--	--	1.5	--	--	252 18	
A81120.00 04/06/65 5000 0900	2.89 248	10.3 99	56.0F	8.5 8.2	706	--	--	55 2.39	--	8.0 .27	275 4.51	--	67 1.89	--	--	1.9	--	400	257 18	
A81120.00 05/03/65 5000 0800	3.48 409	9.9 98	58.0F	8.4 8.1	462	33 1.65 34	24 1.97 40	29 1.26 26	1.4 .04 1	4.0 .13 3	212 3.48 70	24 .50 10	29 .82 16	3.0 .05 1	--	1.2	23 262 275	182 2		
A81120.00 06/15/65 5000 0800	3.83 532	9.0 95	64.0F	8.7 8.1	338	--	--	18 .78	--	12 .40	154 2.53	--	17 .48	--	--	1.0	--	192	141 0	
A81120.00 07/14/65 5000 1730		8.5	--	8.6 8.5	315	--	--	16 .70	--	7.0 .23	156 2.56	--	12 .34	--	--	.9	--	179	132 0	
A81120.00 08/10/65 5000 0815	3.58 442	7.6 92	77.0F	8.5 8.2	312	--	--	15 .65	--	6.0 .20	162 2.66	--	11 .31	--	--	.8	--	171	135 0	
A81120.00 09/13/65 5000 0800	3.03 282	8.5 93	67.0F	7.8 8.1	361	30 1.50 38	18 1.48 38	20 .87 22	2.3 .06 2	0.0 .00	186 3.05 80	10 .21 5	18 .51 13	3.7 .06 2	--	1.0	28 224 222	148 0		

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CALAVERAS RIVER BELOW NEW HOGAN DAM (16c)														
						CA	MG	NA	K	CO3	HCO3	SO4	CL	N03	F	B	SI02	TDS SUM	TH NCH	
825300.00 11/02/64 5000 1315		12.4 126	60.0F	8.2	600	B25300.00	--	--	24 1.04	--	0.0 .00	193 3.17	--	29 .82	--	--	.3	--	--	263 105
825300.00 12/01/64 5000 1125		11.6 113	56.0F	8.3	614	--	--	23 1.00	--	2.0 .07	193 3.17	--	28 .79	--	--	--	.6	--	--	261 99
825300.00 02/02/65 5000 1515	1.51 150	12.5 110	48.0F	7.9	132	--	--	4.2 .18	--	0.0 .00	58 .95	--	2.6 .07	--	--	--	.1	--	--	56 9
825300.00 03/01/65 5000 1500	1.11 60	13.8 138	58.0F	8.0	136	--	--	4.1 .18	--	0.0 .00	60 .98	--	2.9 .08	--	--	--	.0	--	--	57 8
825300.00 04/05/65 5000 1435	1.05	11.6 110	54.0F	8.0	143	--	--	4.6 .20	--	0.0 .00	64 1.05	--	3.0 .08	--	--	--	.0	--	--	61 9
825300.00 05/04/65 5000 0800	1.38	12.2 113	52.0F	7.8	147	18 .90 59	4.6 .38 25	4.6 .20 13	1.9 .05 3	0.0 .00	70 1.15 77	11 .23 15	2.8 .08 5	2.5 .04 3	--	--	.1	16	100 96	64 7
825300.00 06/14/65 5000 0800	1.60 225	13.5 130	55.0F	8.2	145	--	--	4.1 .18	--	0.0 .00	69 1.13	--	3.4 .10	--	--	--	.1	--	--	62 6
825300.00 07/12/65 5000 1000	1.72	13.5 131	56.0F	7.9	147	--	--	4.7 .20	--	0.0 .00	70 1.15	--	2.8 .08	--	--	--	.0	--	--	64 7
825300.00 08/09/65 5000 0720	1.63 200	12.0 122	60.0F	8.2	149	--	--	4.5 .20	--	0.0 .00	73 1.20	--	3.0 .08	--	--	--	.0	--	--	65 5
825300.00 09/13/65 5000 0835	1.36 98	13.5 135	58.0F	8.2	152	18 .90 57	5.1 .42 27	4.5 .20 13	1.9 .05 3	0.0 .00	73 1.20 79	8.0 .17 11	3.1 .09 6	2.8 .05 3	--	--	.0	18	99 97	66 6

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER																								
						CALAVERAS RIVER ABOVE HOGAN RESERVOIR (16d)										F					B					SI02					TDS					TH				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH	NCH																				
B25898.50 11/02/64 1430 5000			60.0F	7.9	B2 5898.50 326	5898.50	--	--	11 .48	--	0.0 .00	113 1.85	--	16 .45	--	--	.0	--	--	--	--	131 39																		
B25898.50 12/01/64 1345 5000			56.0F	8.4	263	--	--	9.1 .40	--	2.0 .07	111 1.82	--	9.9 .28	--	--	.2	--	--	--	--	--	111 17																		
B25898.50 01/05/65 0900 5000			50.0F	7.7	108	--	--	4.3 .19	--	0.0 .00	46 .75	--	1.8 .05	--	--	.1	--	--	--	--	--	42 5																		
B25898.50 02/01/65 1445 5000			50.0F	8.2	153	--	--	5.1 .22	--	0.0 .00	72 1.18	--	3.4 .10	--	--	.0	--	--	--	--	--	66 7																		
B25898.50 03/01/65 1400 5000			56.0F	7.7	174	--	--	5.2 .23	--	0.0 .00	82 1.34	--	4.2 .12	--	--	.0	--	--	--	--	--	76 9																		
B25898.50 04/05/65 1400 5000			54.0F	8.0	168	--	--	6.0 .26	--	0.0 .00	84 1.38	--	3.9 .11	--	--	.0	--	--	--	--	--	72 3																		
B25898.50 05/04/65 0820 5000			56.0F	7.5	178	22 1.10 60	5.4 .44 24	5.9 .26 14	1.7 .04 2	0.0 .00	87 1.43 78	13 .27 15	3.8 .11 6	1.1 .02 1	--	.0	22	126 118	77 6																					
B25898.50 06/14/65 0900 5000			--	8.3	209	--	--	6.8 .30	--	2.0 .07	99 1.62	--	4.2 .12	--	--	.2	--	--	--	--	91 7																			
B25898.50 07/12/65 0900 5000			67.0F	8.5	227	--	--	8.2 .36	--	2.0 .07	112 1.84	--	5.8 .16	--	--	.0	--	--	--	--	100 5																			
B25898.50 08/09/65 0830 5000			72.0F	8.4	244	--	--	8.6 .37	--	3.0 .10	116 1.90	--	7.8 .22	--	--	.1	--	--	--	--	106 6																			
B25898.50 09/13/65 0725 5000			64.0F	8.2	249	28 1.40 53	9.0 .74 28	9.4 .41 16	2.8 .07 3	0.0 .00	121 1.98 77	17 .35 14	8.6 .24 9	0.4 .01	--	.0	22	157 156	107 8																					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER					
							MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										TDS SUM					TH NCH
							CA	MG	NA	K	CO3	HCO3	SO4	CL	N03	F	B	SIO2				
B02590.00 CALAVERAS RIVER AT JENNY LIND (16a)																						
B02590.00 11/16/64 1130	5000	0.75 2.0	5.8 54	53.0F	7.7 7.1	325	--	--	11 .48	--	0.0 .00	80 1.31	--	15 .42	--	--	.2	--	--	132 67		
B02590.00 12/01/64 0930	5000		4.2 40	55.0F	8.2 6.9	358	--	--	9.6 .42	--	0.0 .00	101 1.66	--	13 .37	--	--	.4	--	--	146 63		
B02590.00 01/11/65 1300	5000	5.26 1520	7.3 66	51.0F	7.8 7.3	134	--	--	4.6 .20	--	0.0 .00	58 .95	--	2.0 .06	--	--	.1	--	--	56 9		
B02590.00 02/08/65 0930	5000	2.79 247	11.4 100	49.0F	7.7 7.3	141	--	--	4.1 .18	--	0.0 .00	63 1.03	--	3.1 .09	--	--	.0	--	--	62 11		
B02590.00 03/01/65 1045	5000	1.80 49	12.1 112	53.0F	8.1 8.3	166	--	--	5.1 .22	--	0.0 .00	76 1.25	--	4.1 .12	--	--	.0	--	--	71 9		
B02590.00 04/01/65 0930	5000	1.94 66	10.6 101	55.0F	7.6 7.7	153	--	--	4.8 .21	--	0.0 .00	68 1.12	--	3.4 .10	--	--	.0	--	--	67 11		
B02590.00 05/18/65 1145	5000	2.42 145	12.5 125	59.0F	7.6 8.3	142	16 .80 55	5.6 .46 32	4.0 .17 12	1.3 .03 2	0.0 .00	68 1.12 78	10 .21 15	2.8 .08 6	2.1 .03 2	--	.0	12	90 87	63 7		
B02590.00 06/10/65 0845	5000	2.53 173	11.0 106	56.0F	8.2 7.7	147	--	--	4.6 .20	--	0.0 .00	70 1.15	--	3.0 .08	--	--	.0	--	--	64 7		
B02590.00 07/01/65 1000	5000	2.37 134	12.0 117	57.0F	8.2 8.3	146	--	--	4.5 .20	--	0.0 .00	70 1.15	--	3.0 .08	--	--	.0	--	--	64 7		
B02590.00 08/02/65 0915	5000	2.49 162	10.7 107	59.0F	8.2 7.7	148	--	--	4.2 .18	--	0.0 .00	72 1.18	--	3.1 .09	--	--	.1	--	--	65 6		
B02590.00 09/02/65 1300	5000	2.36 126	10.7 108	60.0F	7.7 7.9	150	17 .85 56	5.5 .45 29	4.1 .18 12	1.9 .05 3	0.0 .00	73 1.20 81	8.0 .17 11	2.9 .08 5	2.0 .03 2	--	.0	15	99 92	65 5		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
						MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE					MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE					F	B	SI02	TDS SUM	TH NCH
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						

B02520.00 01/06/65 5000 1330		9.6 88	53.0F	6.5 7.3	112	B02520.00 CALAVERAS RIVER AT STOCKTON (16b)	--	--	5.5 .24	--	0.0 .00	44 .72	--	3.8 .11	--	--	.1	--	--	39 3
							--	--	4.7 .20	--	0.0 .00	65 1.07	--	3.3 .09	--	--	.0	--	--	60 7
							--	--	5.3 .23	--	0.0 .00	77 1.26	--	4.9 .14	--	--	.0	--	--	76 13
							--	--	5.5 .24	--	0.0 .00	76 1.25	--	4.2 .12	--	--	.0	--	--	71 9
B02520.00 04/01/65 5000 1030		11.3 115	62.0F	8.0 8.8	165		--	--	5.4 .23	--	0.0 .00	73 1.20	--	3.3 .09	--	--	.1	--	65 5	
							--	--	4.7 .20	--	0.0 .00	74 1.21	--	3.1 .09	--	--	.0	--	--	66 6
B02520.00 06/10/65 5000 1000		9.4 107	72.0F	8.2 8.1	150		--	--	5.1 .22	--	1.0 .03	77 1.26	--	3.7 .10	--	--	.0	--	70 6	
							--	--	4.3 .19 13	1.4 .04 3	0.0 .00	74 1.21 79	9.0 .19 12	3.6 .10 7	2.0 .03 2	--	.0	14	95 94	64 4
B02520.00 07/02/65 5000 1230		10.1 126	81.0F	8.2 8.7	151		--	--	4.7 .20	--	0.0 .00	74 1.21	--	3.1 .09	--	--	.0	--	66 6	
							--	--	5.1 .22	--	1.0 .03	77 1.26	--	3.7 .10	--	--	.0	--	--	70 6
B02520.00 08/02/65 5000 1130		9.1 113	81.0F	8.3 8.1	160		--	--	5.1 .22	--	1.0 .03	77 1.26	--	3.7 .10	--	--	.0	--	70 6	
							--	--	4.3 .19 13	1.4 .04 3	0.0 .00	74 1.21 79	9.0 .19 12	3.6 .10 7	2.0 .03 2	--	.0	14	95 94	64 4
B02520.00 09/02/65 5000 1415		13.3 160	77.0F	7.6 8.3	148		19	4.0	4.3	1.4	0.0	74	9.0	3.6	2.0	--	.0	14	95	64
							.95	.33	.19	.04	.00	1.21	.19	.10	.03	.0	.03	.19	.10	.03
							63	22	13	3	.00	79	12	7	2	--	--	--	--	--

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

CLEAR CREEK NEAR IGO (STA. 12a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i		
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents	
10/8/64 1200	56	55	11.0	105	99	0.94 ^c		2.8 0.12		0 0.00	55 0.90		2.0 0.06			0.1			11	47	2	1		USGS
11/13 1320	143	48	12.0	105	99	0.82 ^c		3.9 0.17		0 0.00	46 0.75		2.6 0.07			0.0			17	41	3	2		
12/10 1240	113	49	10.7	95	102			3.9 0.17		0 0.00	53 0.87		2.0 0.06			0.0			17	43	0	2		
1/15/65 1100	170	45	12.2	103	73	0.52 ^c		4.3 0.19		0 0.00	35 0.57		1.5 0.04			0.0			27	26	0	15		
2/5 1215	128	45	11.7	99	80	0.60 ^c		4.4 0.19		0 0.00	36 0.59		2.1 0.06			0.0			24	30	0	20		
3/5 1220	77	47	10.0	87	87	0.70 ^c		3.8 0.17		0 0.00	40 0.66		1.7 0.05			0.1			20	35	2	15		
4/9 1225	398	48	10.9	96	71	0.53 ^c		4.2 0.18		0 0.00	32 0.52		1.3 0.04			0.0			25	26	0	15		
5/6 1555	97	54	10.2	97	89	0.40	3.9 0.32	4.1 0.18	0.4 0.01	0 0.00	42 0.69	5.0 0.10	2.4 0.07	0.8 0.01		0.0	17	ABS 0.0 As 0.00 PO ₄ 0.05	66 ^f	20	36	2	7	
6/11 1250	61	58	10.3	102	91	0.78 ^c		3.3 0.14		0 0.00	45 0.74		2.3 0.06			0.0			15	39	2	8		
7/12 0840	52	58	9.6	95	93	0.81 ^c		3.2 0.14		0 0.00	47 0.77		1.7 0.05			0.0			15	40	1	10		
8/9 0830	51	59	10.0	101	96	0.86 ^c		2.9 0.13		0 0.00	51 0.84		2.3 0.06			0.0			13	43	1	10		
9/13 0810	60	55	10.0	96	95	4.8 0.24	7.3 0.60	3.0 0.13	0.3 0.01	0 0.00	52 0.85	2.0 0.04	1.9 0.05	0.3 0.00		0.0	13	ABS 0.0 As 0.00 PO ₄ 0.01	63 ^f	13	42	0	10	

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COLUSA TROUGH NEAR COLUSA (STA. 87)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent solum	Hardness as CaCO ₃		Tur-bid-ity in ppm	Coliform ^h MPN/ml	Analyzed by i		
			ppm	%Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (B)	Silica (SiO ₂)				Other constituents	
10/5/64 1520		75	7.8	91	528	7.9 8.3	45. 1.96		5. 0.17	217. 3.56	56. 1.17	26. 0.73			0.2		36	172	0	15	USGS			
11/11 1530		52	8.5	77	510	8.2	58. 2.52		0 0.00	137. 2.25	81. 1.69	32. 0.90			0.2		52	114	2	280				
12/9 1235		54	10.3	96	1140	8.0 8.5	133. 5.79		12 0.40	292. 4.79	208. 4.33	87. 2.45			0.3		50	284	25	30				
1/13/65 1035		48	9.0	77	732	7.8 7.7	89. 3.87	3.4 0.09	0 0.00	188. 3.08	129. 2.69	56. 1.58	3.3 0.05	0.7 0.04	0.3	13.	442 ^f	53	168	14	160			
2/2 0935		52	9.6	87	1460	7.8 8.6	188. 8.18	2.1 0.05	24 0.80	308. 5.05	305. 6.35	129. 3.64	2.5 0.04		0.4	17.	940 ^f	53	360	68	20			
3/1 1020		54	7.5	70	1540	7.7 8.6	224. 9.74	2.1 0.05	16 0.53	382. 6.26	277. 5.77	154. 4.34	2.8 0.05		0.7	13.	988 ^f	57	368	29	15			
4/5 1150		58	9.4	92	487	8.0 8.4	50. 2.18	1.5 0.04	4 0.13	147. 2.41	71. 1.48	32. 0.90	3.6 0.06		0.3	28	297 ^f	45	133	6	90			
5/3 1135		62	9.7	99	716	8.1 8.0	88. 3.83	1.8 0.05	0 0.00	175. 2.87	148. 3.08	55. 1.55	5.7 0.09		0.3	17.	468 ^f	51	184	40	70			
6/16 1115		73	7.7	88	694	7.9 8.4	90. 3.92	1.4 0.04	6 0.20	186. 3.05	118. 2.46	46. 1.30	2.9 0.05		0.2	16	437 ^f	54	162	0	60			
7/14 1050		79	6.7	82	557	7.7 8.5	64. 2.78	1.1 0.03	8 0.27	192. 3.15	68. 1.42	30. 0.85	2.3 0.04	0.4 0.02	0.3	21.	367 ^f	48	152	0	30			
8/11 1230		73	7.0	80	547	7.5 8.6	56. 2.44	1.6 0.04	6 0.20	222. 3.64	60. 1.25	28. 0.79	2.2 0.04		0.1	19.	341 ^f	42	168	0	25			
9/15 1030		71	7.9	89	517	7.7 8.0	51. 2.22	1.6 0.04	0 0.00	232. 3.80	49. 1.02	26. 0.73	0.7 0.01		0.2	16.	320 ^f	40	162	0	35			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. 0	DO	TEMP	LAB-PH FLO-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER					
							MINERAL CONSTITUENTS IN					MILLIEQUIVALENT PER LITER					F	B	SI02	TDS SUM	TH NCH	
							CA	MG	NA	K	CD3	HCO3	SO4	CL	NO3							
BOLL25.00 CONSUMES RIVER AT McCONNELL (94a)																						
801125.00 11/12/64 1515	5000	6.82 426	10.0 94	55.0F	7.7 7.3	100	--	--	5.4 .23	--	0.0 .00	38 .62	--	4.5 .13	--	--	--	.0	--	--	34 3	
801125.00 01/06/65 0930	5000	5.43	11.0 98	51.0F	7.6 7.1	77	--	--	3.4 .15	--	0.0 .00	31 .51	--	1.4 .04	--	--	--	.0	--	--	30 5	
801125.00 03/04/65 0815	5000	7.62 758	11.0 97	50.0F	7.7 7.1	71	--	--	3.5 .15	--	0.0 .00	35 .57	--	1.7 .05	--	--	--	.0	--	--	29 1	
801125.00 05/05/65 1430	5000	8.62 1180	10.4 110	65.0F	7.6 7.3	61	5.8 .29 48	2.1 .17 28	3.1 .13 21	0.7 .02 3	0.0 .00	30 .49 83	2.0 .04 7	1.3 .04 7	1.2 .02 3	--	.0	17	50 48	23 0		
801125.00 07/13/65 1115	5000	5.38	8.6 103	77.0F	8.1 8.1	97	--	--	4.2 .18	--	0.0 .00	49 .80	--	1.8 .05	--	--	.0	--	--	39 0		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER						
							MINEFAL CONSTITUENTS IN PERCENT REACTANCE VALUE						MILLIEQUIVALENT PER LITER										
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH			
B11150.00 COBURNES RIVER AT MICHIGAN BAR (94)																							
B11150.00 11/12/64 11345	5000	3.77 435	10.6 99	54.0F	7.6 7.3	109	--	--	4.7 .20	--	0.0 .00	36 .59	--	3.9 .11	--	--	.0	--	--	--	40 11		
B11150.00 01/12/65 1400	5000	5.49 2310	11.8 105	50.0F	7.9 7.3	69	--	--	3.2 .14	--	0.0 .00	32 .52	--	1.6 .05	--	--	.0	--	--	27 1			
B11150.00 03/15/65 1000	5000	4.16 700	11.1 101	52.0F	7.9 7.3	77	--	--	3.5 .15	--	0.0 .00	39 .64	--	1.6 .05	--	--	.0	--	--	32 0			
B11150.00 05/18/65 1415	5000	4.45 960	9.9 107	66.0F	7.2 7.3	50	5.0 .25 49	1.5 .12 24	2.7 .12 24	0.8 .02 4	0.0 .00	26 .43 88	1.0 .02 4	0.9 .03 6	0.8 .01 2	--	.0	17	32 42	18 0			
B11150.00 07/01/65 1230	5000	3.14 180	8.9 106	75.0F	8.0 7.7	78	--	--	3.6 .16	--	0.0 .00	38 .62	--	1.6 .05	--	--	.0	--	--	30 0			
B11150.00 09/02/65 1030	5000	2.53 50	8.6 102	75.0F	7.5 8.1	96	14 .70 71	0.7 .06 6	4.1 .18 18	1.4 .04 4	0.0 .00	48 .79 85	4.0 .08 9	1.8 .05 5	0.5 .01 1	--	.0	19	65 69	38 0			

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
COTTONWOOD CREEK NEAR COTTONWOOD (STA. 12b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH at 25°C	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by		
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/8/64 0925	62	67	9.6	105	178	7.4 8.3	1.50 ^c	8.0 0.35				2 0.07	98 1.61		2.7 0.08		0.1			19	75	0	2		USGS
11/9 1510	422	58	9.4	93	253	7.3 8.1	1.84 ^c	12. 0.52				0 0.00	83 1.36		20. 0.56		0.0			22	92	24	100		
12/10 1045	396	52	9.2	84	305	7.6 8.4	2.52 ^c	13. 0.57				4 0.13	123 2.02		15. 0.42		0.0			18	126	19	1		
1/14/65 1600	2700	45	10.7	89	228	7.4 8.3	2.04 ^c	7.7 0.33				1 0.03	118 1.93		3.3 0.09		0.1			14	102	4	120		
2/1 1545	1950	49	10.1	89	217	7.6 8.0	2.00 ^c	5.1 0.22				0 0.00	116 1.90		3.5 0.10		0.0			10	100	5	120		
3/1 1500	734	52	10.6	97	248	7.6 8.6	2.32 ^c	8.5 0.37				6 0.20	118 1.93		5.5 0.16		0.1			14	116	9	45		
4/5 1600	479	55	9.1	86	283	8.0 8.3	2.52 ^c	11. 0.48				2 0.07	136 2.23		10. 0.28		0.0			16	126	11	25		
5/6 1350	956	58	8.1	80	250	7.8 8.3	30. 1.50	9.5 0.78	8.2 0.36	0.7 0.02	2 0.07	128 2.10	19. 0.40	4.6 0.13	1.2 0.02		0.0	18. ABS 0.0 As 0.00 PO ₄ 0.05	155 ^f	14	114	6	15		
6/11 1125	349	73	8.1	94	248	7.8 8.0	2.22 ^c	8.3 0.36	8.3 0.36		0 0.00	133 2.18		6.7 0.19			0.1			14	111	2	2		
7/12 1140	130	76	8.1	97	252	7.8 8.4	2.24 ^c	8.3 0.36	8.3 0.36		3 0.10	130 2.13		7.2 0.20			0.0			14	112	0	1		
8/9 1030	124	76	8.9	106	218	7.6 8.4	1.96 ^c	7.3 0.32	7.3 0.32		2 0.07	118 1.93		5.7 0.16			0.1			14	98	0	1		
9/13 1010	60	69	9.1	101	217	7.7 7.8	18. 0.90	12. 0.98	8.7 0.38	1.4 0.04	0 0.00	122 2.00	6.0 0.12	5.8 0.16	0.2 0.00		0.0	21. ABS 0.0 As 0.00 PO ₄ 0.07	129 ^f	17	94	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
COTTONWOOD CREEK BELOW NORTH FORK COTTONWOOD CREEK (STA. 11a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in equivalents per million											Total dis- solved solids in ppm	Per- cent sed- iment	Hardness as CaCO ₃	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ					
			parts per million																					
			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)							Silica (SiO ₂)	Other constituents			
10/8/64 1120	Est. 5	69	9.5	107	328	7.8 8.3	2.86 ^c	12. 0.52		2 0.07	155 2.54		24. 0.68			0.1				143	13	1		USGS
11/13 1245	40	47	9.5	83	273	7.7 8.3	2.26 ^c	11. 0.48		2 2.07	113 1.85		12. 0.34			0.0				113	17	20		
12/10	30	50	10.0	90	258	7.9 8.2	2.24 ^c	9.8 0.43		0 0.00	126 2.07		8.3 0.23			0.1				112	9	3		
1/15/65 1000	200	45	11.2	94	203	7.4 8.3	1.90 ^c	5.6 0.24		1 0.03	111 1.82		1.9 0.05			0.0				95	2	40		
2/5 1125	100	47	10.2	89	223	7.9 8.1	2.02 ^c	6.4 0.28		0 0.00	117 1.92		3.4 0.10			0.0				101	5	35		
3/1 1630	75	51	10.2	93	236	7.8 8.2	2.24 ^c	6.1 0.27		0 0.00	126 2.07		3.1 0.09			0.0				112	9	8		
4/9 1140	300	48	8.4	74	188	7.8 7.9	1.60 ^c	8.1 0.35		0 0.00	88 1.44		2.7 0.08			0.1				80	8	70		
5/6 1500	300	55	8.3	79	225	8.0 8.3	27. 1.35	9.4 0.77	0.7 0.02	3 0.10	118 1.93	14. 0.29	2.8 0.08	1.0 0.02		0.0	22. PO ₄ 0.05	ABS 0.0 As 0.00	140 ^f	106	4	15		
6/11 1205	100	72	7.8	90	235	7.9 8.5	2.22 ^c	6.5 0.28		8 0.27	118 1.93		4.4 0.12			0.0				111	1	2		
7/12 1040	40	74	7.9	93	254	7.8 8.5	2.34 ^c	7.7 0.33		3 0.10	134 2.20		7.1 0.20			0.0				117	2	1		
8/9 0915	35	77	8.4	102	280	7.8 8.4	2.58 ^c	9.4 0.41		4 0.13	149 2.44		10. 0.28			0.1				129	0	1		
9/13 0845	30	70	8.4	95	297	7.8 8.2	29. 1.45	15. 1.27	1.5 0.04	0 0.00	161 2.64	6.0 0.12	12. 0.34	3.7 0.06		0.0	20. PO ₄ 0.05	ABS 0.0 As 0.00	166 ^f	136	4	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SOUTH FORK COTTONWOOD CREEK ABOVE COTTONWOOD CREEK (STA. 11b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by
			ppm		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents	Total ppm	N.C. ppm		
10/8/64	No Flow																				
11/13 1205	35	58	11.2	427	3.04 ^c		26.1 1.13		0.00	131 2.15		45.1 1.27			0.2			152	45	20	USGS
12/10 1105	25	52	8.6	394	2.92 ^c		21.1 0.91		0.00	144 2.36		31.1 0.87			0.1			146	28	2	
1/14/65 1630	250	46	10.7	297	2.64 ^c		11.1 0.48		2.07	145 2.38		6.2 0.17			0.1			132	10	80	
2/5 1030	150	45	10.4	275	2.44 ^c		9.3 0.40		4.013	128 2.10		6.6 0.19			0.0			122	10	300	
3/1 1550	75	53	8.1	271	2.40 ^c		9.9 0.43		4.013	126 2.07		7.2 0.20			0.0			120	10	40	
4/5 1545	60	54	7.6	326	2.82 ^c		14.1 0.61		0.00	154 2.52		14.1 0.39			0.0			141	15	10	
5/6 1425	245	58	8.2	318	4.2 2.10	8.8 0.72	11.1 0.48	0.7 0.02	4.013	150 2.46	28.1 0.58	7.4 0.21	0.7 0.01		0.1	14.1	ABS 0.1 As 0.00 PO ₄ 0.05	141	11	40	
6/11 1055	50	72	7.8	285	2.50 ^c		11.1 0.48		9.030	124 2.03		10.1 0.28			0.0			125	9	2	
7/12 1100	30	75	8.1	323	2.70 ^c		13.1 0.57		2.007	148 2.43		16.1 0.45			0.1			135	10	1	
8/9 1000	5	74	6.8	342	2.92 ^c		15.1 0.65		6.020	152 2.49		18.1 0.51			0.1			146	12	2	
9/13 1040	1	70	6.8	366	4.0 2.00	13.1 1.10	15.1 0.65	1.5 0.04	0.00	168 2.75	20.1 0.42	22.1 0.62	3.2 0.06		0.1	16.1	ABS 0.0 As 0.00 PO ₄ 0.01	155	17	1	

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
COW CREEK NEAR MILLVILLE (STA. 88a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/9/64 1010	23	67	8.8	96	201	$\frac{7.7}{8.2}$	$\frac{1.56^c}{1.56^c}$		$\frac{10.4}{0.44}$			$\frac{0}{0.00}$	$\frac{110}{1.80}$		$\frac{7.7}{0.22}$		$\frac{0.1}{0.1}$		78	0	2		USGS	
11/9 1150	2530	53	10.2	94	155	$\frac{7.3}{6.9}$	$\frac{1.06^c}{1.06^c}$		$\frac{13}{0.57}$			$\frac{0}{0.00}$	$\frac{52}{0.85}$		$\frac{8.6}{0.24}$		$\frac{0.1}{0.1}$		53	10	130			
12/10 1600	270	52	9.6	88	154	$\frac{7.3}{8.0}$	$\frac{1.12^c}{1.12^c}$		$\frac{8.3}{0.36}$			$\frac{0}{0.00}$	$\frac{64}{1.05}$		$\frac{7.4}{0.21}$		$\frac{0.2}{0.2}$		56	4	4			
1/14/65 1515	1150	46	11.3	96	104	$\frac{7.2}{7.8}$	$\frac{0.82^c}{0.82^c}$		$\frac{5.7}{0.25}$			$\frac{0}{0.00}$	$\frac{51.4}{0.84}$		$\frac{2.5}{0.07}$		$\frac{0.1}{0.1}$		41	0	10			
2/1 1335	768	48	11.5	100	105	$\frac{7.2}{7.7}$	$\frac{0.82^c}{0.82^c}$		$\frac{5.3}{0.23}$			$\frac{0}{0.00}$	$\frac{48}{0.79}$		$\frac{2.6}{0.07}$		$\frac{0.3}{0.3}$		41	2	4			
3/1 1220	404	48	10.0	87	117	$\frac{7.5}{8.2}$	$\frac{0.90^c}{0.90^c}$		$\frac{6.6}{0.29}$			$\frac{0}{0.00}$	$\frac{56}{0.92}$		$\frac{2.7}{0.08}$		$\frac{0.0}{0.0}$		45	0	4			
4/5 1345	570	59	9.2	86	120	$\frac{7.4}{7.6}$	$\frac{0.92^c}{0.92^c}$		$\frac{6.1}{0.27}$			$\frac{0}{0.00}$	$\frac{56}{0.92}$		$\frac{7.4}{0.21}$		$\frac{0.0}{0.0}$		46	0	2			
5/5 0720	616	54	9.2	86	99	$\frac{7.3}{8.0}$	$\frac{1.2}{0.60}$	$\frac{2.4}{0.20}$	$\frac{4.6}{0.20}$	$\frac{0.7}{0.02}$	$\frac{0}{0.00}$	$\frac{48}{0.79}$	$\frac{5.0}{0.10}$		$\frac{2.2}{0.06}$	$\frac{1.3}{0.02}$	$\frac{0.0}{0.0}$	$\frac{25}{0.05}$	40	1	1			
6/3 1015	211	73	8.6	100	119	$\frac{7.7}{8.3}$	$\frac{0.94^c}{0.94^c}$		$\frac{5.8}{0.25}$		$\frac{1}{0.03}$	$\frac{62.4}{1.02}$			$\frac{2.8}{0.08}$		$\frac{0.0}{0.0}$		47	0	2			
7/6 1530	58	85	8.6	113	151	$\frac{7.9}{8.2}$	$\frac{1.20^c}{1.20^c}$		$\frac{7.7}{0.33}$		$\frac{0}{0.00}$	$\frac{82.4}{1.34}$			$\frac{3.7}{0.10}$		$\frac{0.1}{0.1}$		60	0	1			
8/13 0830	112	73	8.0	93	163	$\frac{7.6}{8.0}$	$\frac{1.28^c}{1.28^c}$		$\frac{8.0}{0.35}$		$\frac{0}{0.00}$	$\frac{84}{1.38}$			$\frac{5.2}{0.15}$		$\frac{0.0}{0.0}$		64	0	4			
9/7 1320	43	73	9.4	109	171	$\frac{8.1}{7.9}$	$\frac{1.6}{0.80}$	$\frac{6.3}{0.52}$	$\frac{9.3}{0.40}$	$\frac{1.3}{0.03}$	$\frac{0}{0.00}$	$\frac{92}{1.51}$	$\frac{3.0}{0.06}$		$\frac{5.9}{0.17}$	$\frac{0.5}{0.01}$	$\frac{0.0}{0.0}$	$\frac{30}{0.06}$	66	0	2			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER		G.M. Q	CC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
							NEAR WALNUT GROVE (98)										TDS SUM				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TH NCH		
B91700.00 10/05/64 5000 1345		3.09	7.5 84	70.0F	8.0 7.3	149	B9 1700.00 DELTA	--	8.3 .36	--	0.0 .00	75 1.23	4.4 .12	--	--	.0	--	--	56 0		
B91700.00 11/09/64 5000 1430		4.28	8.9 87	58.0F	8.1 7.3	188	--	12 .52	--	0.0 .00	81 1.33	7.8 .22	--	--	--	.1	--	--	64 0		
B91700.00 12/09/64 5000 1345		3.55	10.2 94	53.0F	8.2 7.3	176	--	11 .48	--	0.0 .00	76 1.25	6.9 .19	--	--	--	.3	--	--	61 0		
B91700.00 01/05/65 5000 0930		19.33	11.6 100	48.0F	7.9 7.3	95	--	4.9 .21	--	0.0 .00	41 .67	1.8 .05	--	--	--	.0	--	--	36 3		
B91700.00 02/04/65 5000 1430		16.12	10.7 91	47.0F	8.1 7.3	121	--	5.5 .24	--	0.0 .00	59 .97	2.8 .08	--	--	--	.0	--	--	47 0		
B91700.00 03/03/65 5000 1430		3.35	10.9 100	53.0F	7.9 7.3	132	--	6.9 .30	--	0.0 .00	62 1.02	5.2 .15	--	--	--	.0	--	--	50 0		
B91700.00 04/07/65 5000 1500		4.75	10.1 94	54.0F	7.9 7.3	128	--	8.6 .37	--	0.0 .00	56 .92	5.1 .14	--	--	--	.1	--	--	48 2		
B91700.00 05/04/65 5000 1400		3.10	10.1 101	60.0F	7.7 7.3	92	8.8 .44 47	3.6 .30 32	0.8 .02 2	0.0 .00	43 .71 76	7.0 .15 16	2.7 .06 6	1.1 .02 2	--	.0	16	65 65	37 2		
B91700.00 06/16/65 5000 1300		3.97	8.4 95	71.0F	8.2 7.5	164	--	11 .48	--	0.0 .00	68 1.12	--	8.4 .24	--	--	.0	--	--	57 1		
B91700.00 07/14/65 5000 1340		3.38	8.0 91	72.0F	8.0 7.7	148	--	9.4 .41	--	0.0 .00	68 1.12	--	6.2 .17	--	--	.0	--	--	53 0		
B91700.00 08/11/65 5000 1330		3.66	7.4 84	72.0F	8.5 7.7	160	--	11 .48	--	2.0 .07	73 1.20	--	7.6 .21	--	--	.1	--	--	56 0		
B91700.00 09/14/65 5000 1315		3.00	8.0 90	71.0F	7.8 7.7	218	17 .85 38	8.1 .67 30	1.8 .05 2	0.0 .00	98 1.61 71	12 .25 11	14 .39 17	1.4 .02 1	--	.0	20	134 137	76 0		

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
ELDER CREEK AT GERBER (STA. 95a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i		
			parts per million												Other constituents						
			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)				Boron (B)				Silica (SiO ₂)	
			ppm	%Sat	Specific conductance (micromhos at 25°C)	pH											Total ppm	N.C. ppm			
10/7/64	No Flow																				USGS
11/13 1115	160	51	10.7	97	343	7.9 8.5	2.98 ^c	14. 0.61		5 0.17	150 2.46		11. 0.31		0.1		149	18	45		
12/9 1725	32	53	9.8	91	215	7.6 8.4	1.91 ^c	6.8 0.30		5 0.17	97 1.59		4.6 0.13		0.1		96	8	20		
1/14/65 0955	275	44	10.9	90	288	8.1 8.6	2.80 ^c	7.8 0.34		4 0.13	154 2.52		5.6 0.16		0.0		140	7	50		
2/5 0935	210	47	10.1	87	253	7.9 8.5	2.38 ^c	8.2 0.36		2 0.07	134 2.20		6.4 0.18		0.0		119	6	55		
3/5 0930	66	50	9.1	81	319	8.0 8.5	2.96 ^c	9.5 0.41		8 0.27	154 2.52		12 0.34		0.0		148	9	6		
4/9 0945	1200	48	8.8	76	159	7.9 8.0	1.48 ^c	4.2 0.18		0 0.00	88 1.44		1.8 0.05		0.0		74	2	500		
5/6 1145	130	53	9.2	85	282	8.2 8.5	34 1.70	12 1.02	7.5 0.33	5 0.17	149 2.44	12 0.25	6.8 0.19	1.4 0.02	0.0	18	136	6	11	157 ^f	
6/2 1915	35	70	9.0	101	365	8.1 8.7	3.56 ^c	12 0.52		12 0.40	184 3.02		16 0.45		0.0		178	7	2		
7/12 1215	36	81	9.5	119	442	8.3 8.6	4.08 ^c	12 0.52		14 0.47	203 3.33		26 0.73		0.0		204	15	1		
8/9 1215	2.6	80	12.2	152	464	7.9 8.6	4.28 ^c	19 0.83		11 0.37	232 3.80		24 0.68		0.1		214	6	1		
9/8 1210	--	80	12.0	149	519	8.2 8.4	43 2.15	33 2.73	21 0.91	1.5 0.04	10 0.33	17 0.35	26 0.73	0.5 0.01	0.0	22	244	9	10	303 ^f	

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ELDER CREEK NEAR PASKENTA (STA. 13e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH @ 25°C	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	%Sat			equivalents per million																	
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)				Other constituents
10/6/64 1210	0.5	70	9.7	110	2,420	8.2 8.4	9.80 ^c		225.9.79		40.13	1302.13		610.17.21			0.3			490	377	1		USGS
11/12 1500	205	57	10.0	98	323	- 8.5	2.82 ^c		11.0.48		40.13	1452.38		16.0.45			0.1			141	16	40		
12/10 1235	34	50	11.4	103	425	8.1 8.4	3.62 ^c		200.87		80.27	1822.98		290.82			0.0			181	19	1		
1/14/65 1530	269	50	10.7	96	270	8.3 8.6	2.66 ^c		6.70.29		50.17	1452.38		4.80.14			0.0			133	6	140		
2/3 1225	190	49	10.5	93	233	7.9 8.4	2.22 ^c		6.20.27		40.13	1201.97		5.90.17			0.0			111	6	140		
3/2 1115	66	49	9.8	87	289	7.8 8.4	2.72 ^c		8.10.35		40.13	1452.38		120.34			0.0			136	11	7		
4/6 1445	26	54	10.6	100	307	8.2 8.5	2.84 ^c		100.44		50.17	1512.47		120.34			0.1			142	10	8		
5/5 1000	124	52	11.3	104	276	8.2 8.3	231.15	181.49	7.00.30	0.50.01	50.17	1462.39	120.25	6.30.18	1.10.02		0.0	17ABS 0.0 As 0.00 PO ₄ 0.05	132	4	15			
6/17 1145	21	71	8.6	99	399	8.2 8.7	3.78 ^c		130.57		120.40	1923.15		230.65			0.0			189	12	1		
7/15 0945	16	77	9.7	118	479	8.3 8.8	4.00 ^c		261.13		160.53	1883.08		471.33	2.40.04		0.0			200	20	1		
8/12 1340	7.5	80	8.5	107	537	8.3 8.7	4.36 ^c		30.1.30		120.40	2103.44		571.61			0.1			218	26	2		
9/16 1130	4.4	70	10.2	116	697	8.1 8.6	381.90	342.76	542.35	1.30.03	80.27	2083.41	110.23	1123.16	2.90.05		0.2	13ABS 0.0 As 0.00 PO ₄ 0.02	233	49	1			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						MIDDLE FORK, NEAR MERRIMAC (19b)										F	R	SI02	TDS SUM	TH NCH
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						
A55100.00 10/14/64 5000 1200	2.38 222	10.3 110	60.0F	8.3 8.1	161	A55100.00	FEATHER RIVER, MIDDLE FORK, NEAR MERRIMAC (19b)	--	--	7.0 .30	--	2.0 .07	80 1.31	--	3.2 .09	--	.1	--	--	68 0
A55100.00 11/19/64 5000 1530	2.93 239	12.8 102	38.0F	8.1 7.3	138	--	--	--	--	5.8 .25	--	0.0 .00	72 1.18	--	1.7 .05	--	.1	--	--	55 0
A55100.00 12/03/64 5000 1200	4.54 964	11.8 101	43.0F	7.8 7.3	92	--	--	--	--	3.4 .15	--	0.0 .00	47 .77	--	0.9 .03	1.3 .02	.0	--	--	39 1
A55100.00 01/26/65 5000 1400		13.1 116	41.0F	7.9 7.3	72	--	--	--	--	3.5 .15	--	0.0 .00	37 .61	--	0.9 .03	0.8 .01	.1	--	62	28 0
A55100.00 02/09/65 5000 1315	9.02	12.5 102	40.0F	8.0 7.2	83	--	--	--	--	4.0 .17	--	0.0 .00	46 .75	--	1.0 .03	0.8 .01	.1	--	60	33 0
A55100.00 03/12/65 5000 1315	8.16 5080	11.8 105	46.0F	7.9 7.3	89	--	--	--	--	3.6 .16	--	0.0 .00	46 .75	--	1.2 .03	0.6 .01	.1	--	66	37 0
A55100.00 04/01/65 5000 1315	8.53	11.6 105	47.0F	7.9 7.5	98	--	--	--	--	5.1 .22	--	0.0 .00	52 .85	--	1.4 .04	0.5 .01	.0	--	71	40 0
A55100.00 05/13/65 5000 1200	9.05	10.8 108	55.0F	7.7 7.6	79	9.6 .48 59	2.2 .18 22	3.3 .14 17	0.4 .01 1	0.0 .00	42 .69 88	3.0 .06 8	0.8 .02 3	0.5 .01 1	--	.0	16	60 56	33 0	
A55100.00 06/11/65 5000 1230	7.95	9.2 104	65.0F	8.1 7.6	80	--	--	3.4 .15	--	0.0 .00	42 .69	--	0.8 .02	1.0 .02	--	.1	--	58	34 0	
A55100.00 07/08/65 5000 1315	6.51 674	8.7 101	68.0F	8.2 8.0	114	--	--	4.3 .19	--	0.0 .00	62 1.02	--	1.4 .04	2.5 .04	--	.0	--	80	49 0	
A55100.00 08/06/65 5000 1230	5.96 2070	8.6 108	75.0F	8.2 8.3	142	--	--	5.9 .26	--	0.0 .00	78 1.28	--	1.8 .05	--	--	.0	--	--	63 0	
A55100.00 09/03/65 5000 1215	5.93 2040	9.1 107	69.0F	7.9 8.2	155	19 .95 58	4.5 .37 23	6.4 .28 17	1.5 .04 2	0.0 .00	82 1.34 85	7.0 .15 9	2.7 .08 5	0.5 .01 1	--	.0	14	97 96	66 0	

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.M. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER					
															F	B	SI02	TDS SUM	TH NCH	
A05103.00 FEATHER RIVER AT NICOLAUS (20)																				
A05103.00 10/09/64 5000 1430	22.68 2140	9.3 104	70.0F	8.2 7.7	120	A05103.00	--	--	5.1 .22	--	0.0 .00	70 1.15	--	1.5 .04	--	--	.0	--	--	52 0
A05103.00 11/13/64 5000 1515	25.14 5300	10.7 97	52.0F	7.8 7.3	122	--	--	--	5.3 .23	--	0.0 .00	60 .98	--	2.6 .07	--	--	.1	--	--	49 0
A05103.00 12/11/64 5000 1445	23.93 3600	11.5 103	51.0F	7.9 7.3	116	--	--	--	4.7 .20	--	0.0 .00	64 1.05	--	1.1 .03	--	--	.0	--	--	49 0
A05103.00 01/08/65 5000 1545	43.04	11.4 98	48.0F	7.3 7.1	72	--	--	--	3.2 .14	--	0.0 .00	28 .46	--	1.2 .03	--	--	.1	--	--	28 5
A05103.00 02/05/65 5000 1530	34.09 21900	11.6 101	49.0F	7.8 7.3	80	--	--	--	3.1 .13	--	0.0 .00	39 .64	--	1.4 .04	--	--	.0	--	--	33 1
A05103.00 03/05/65 5000 1515	28.39 10200	11.7 106	52.0F	7.9 7.3	88	--	--	--	3.4 .15	--	0.0 .00	44 .72	--	1.4 .04	--	--	.0	--	--	36 0
A05103.00 04/09/65 5000 1430	28.78 10900	11.2 95	47.0F	7.6 7.3	82	--	--	--	3.6 .16	--	0.0 .00	42 .69	--	1.0 .03	--	--	.0	--	--	34 0
A05103.00 05/07/65 5000 1500	29.48 12100	11.1 107	57.0F	7.6 7.3	71	8.4 .42 58	2.1 .17 23	2.8 .12 16	0.6 .02 3	0.0 .00	34 .56 76	7.0 .15 20	0.9 .03 4	0.1 .00	0.1 .00	--	.0	16	53 55	30 2
A05103.00 06/18/65 5000 1430	24.77 4800	9.0 99	65.0F	8.0 7.3	83	--	--	--	3.6 .16	--	0.0 .00	44 .72	--	0.9 .03	--	--	.0	--	--	35 0
A05103.00 07/16/65 5000 0750	22.88 2350	8.4 100	76.0F	8.2 8.1	112	--	--	--	4.6 .20	--	0.0 .00	60 .98	--	1.8 .05	--	--	.0	--	--	48 0
A05103.00 08/13/65 5000 1400	22.33 1770	8.4 103	79.0F	8.0 7.7	115	--	--	--	5.0 .22	--	0.0 .00	62 1.02	--	1.5 .04	--	--	.0	--	--	48 0
A05103.00 09/17/65 5000 1345	1640	9.5 100	65.0F	8.0 7.9	117	16 .80 65	2.4 .20 16	4.6 .20 16	1.1 .03 2	0.0 .00	65 1.07 88	5.0 .10 8	1.6 .05 4	0.2 .00	0.2 .00	--	.0	12	76 75	50 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER					
						MILLIEQUIVALENT PER LITER										TDS					
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH NCH		
A53140.00 FEATHER RIVER, NORTH FORK, AT BIG BAR (19a)																					
A53140.00 10/09/64 5000 1000	3.43 44	9.6 101	61.0F	8.0 7.5	121	--	--	5.2 .23	--	0.0 .00	72 1.18	--	1.2 .03	--	--	.0	--	--	53 0		
A53140.00 11/20/64 5000 0915	3.31 34	11.9 108	42.0F	8.2 7.3	117	--	--	4.8 .21	--	0.0 .00	70 1.15	--	0.6 .02	--	--	.1	--	49 0			
A53140.00 12/04/64 5000 0930	3.52 58	11.4 98	45.0F	8.1 7.3	128	--	--	4.9 .21	--	0.0 .00	72 1.18	--	0.9 .03	1.3 .02	--	.0	--	54 0			
A53140.00 01/15/65 5000 1430	8.13 1480	12.5 106	44.0F	8.0 7.3	80	--	--	3.5 .15	--	0.0 .00	44 .72	--	1.2 .03	0.5 .01	--	.0	--	60 35 0			
A53140.00 02/05/65 5000 1100	8.90 1940	12.3 104	44.0F	7.9 7.3	80	--	--	3.3 .14	--	0.0 .00	42 .69	--	0.4 .01	0.5 .01	--	.0	--	55 34 0			
A53140.00 03/10/65 5000 1145	4.03 140	12.0 106	47.0F	7.8 7.3	80	--	--	2.7 .12	--	0.0 .00	44 .72	--	0.6 .02	0.5 .01	--	.0	--	54 35 0			
A53140.00 04/09/65 5000 1130		11.7 99	44.0F	7.6 7.3	78	--	--	2.5 .11	--	0.0 .00	45 .74	--	0.6 .02	0.9 .01	--	.0	--	56 36 0			
A53140.00 05/12/65 5000 1130	7.23 985	11.0 109	56.0F	7.6 7.3	74	8.6 .43 57	2.3 .19 25	2.9 .13 17	0.5 .01 1	0.0 .00 0.0	40 .66 88	3.0 .06 8	0.6 .02 3	0.6 .01 1	--	.0	14	55 52 31 0			
A53140.00 06/18/65 5000 0915	3.88 90	10.1 105	60.0F	8.1 7.3	88	--	--	3.8 .17	--	0.0 .00	48 .79	--	0.7 .02	1.1 .02	--	.0	--	58 37 0			
A53140.00 07/21/65 5000 1140		9.8 115	71.0F	7.9 8.1	98	--	--	3.7 .16	--	0.0 .00	55 .90	--	1.0 .03	--	--	.0	--	--	43 0		
A53140.00 08/13/65 5000 1015	99	9.9 113	68.0F	8.2 7.7	99	--	--	3.9 .17	--	0.0 .00	56 .92	--	1.0 .03	--	--	.0	--	42 0			
A53140.00 09/08/65 5000 0915		9.7 104	63.0F	7.9 7.5	104	10 .50 45	4.6 .38 34	4.4 .19 17	1.5 .04 4	0.0 .00 0.0	61 1.00 91	4.0 .08 7	0.8 .02 2	0.3 .00	--	.0	10	68 65 44 0			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME		G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER					
							MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE															
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
A51140.00 FEATHER RIVER AT OROVILLE (19)																						
A51140.00 10/09/64 1200	5000	136.31 2640	10.4 115	68.0F	8.0 7.9	123	--	--	5.2 .23	--	0.0 .00	73 1.20	--	1.0 .03	--	--	.0	--	--	--	52 0	
A51140.00 11/13/64 1300	5000	136.95 3740	12.3 106	48.0F	7.3 7.3	98	--	--	5.6 .24	--	0.0 .00	50 .82	--	1.2 .03	--	--	.0	--	--	40 0		
A51140.00 12/11/64 1030	5000	4.20 7760	12.9 114	49.0F	7.7 7.7	79	--	--	3.3 .14	--	0.0 .00	42 .69	--	0.8 .02	1.4 .02	--	.0	--	--	32 0		
A51140.00 01/08/65 1115	5000	9.05 25600	13.7 110	42.0F	7.4 7.1	65	--	--	3.3 .14	--	0.0 .00	33 .54	--	0.4 .01	1.1 .02	--	.1	--	--	26 0		
A51140.00 02/05/65 1300	5000	5.57 12200	12.5 106	46.0F	7.9 7.3	79	--	--	3.8 .17	--	0.0 .00	41 .67	--	0.6 .02	0.8 .01	--	.1	--	58	32 0		
A51140.00 03/05/65 1030	5000	3.38 5560	12.5 107	47.0F	7.9 7.3	87	--	--	3.7 .16	--	0.0 .00	46 .75	--	1.2 .03	0.2 .00	--	.0	--	59	36 0		
A51140.00 04/09/65 1030	5000	5.17 11000	13.2 112	46.0F	7.6 7.3	77	--	--	3.9 .17	--	0.0 .00	42 .69	--	1.0 .03	0.7 .01	--	.0	--	62	31 0		
A51140.00 05/07/65 1015	5000	4.86 10000	12.9 117	51.0F	7.5 7.3	72	9.2 .46 63	1.6 .13 18	3.1 .13 18	0.5 .01 1	0.0 .00	38 .62 90	2.0 .04 6	1.1 .03 4	0.2 .00	--	.0	17	58 53	30 0		
A51140.00 06/18/65 1200	5000	3.33 5400	11.4 118	62.0F	8.1 7.5	86	--	--	3.6 .16	--	0.0 .00	47 .77	--	0.6 .02	0.7 .01	--	.0	--	60	36 0		
A51140.00 07/16/65 1245	5000	2.48 3390	9.4 103	67.0F	7.7 7.8	95	--	--	4.1 .18	--	0.0 .00	51 .84	--	1.1 .03	--	--	.0	--	--	39 0		
A51140.00 08/13/65 0915	5000	2.58 3600	9.6 106	68.0F	8.1 7.7	97	--	--	4.0 .17	--	0.0 .00	54 .89	--	1.0 .03	--	--	.0	--	--	40 0		
A51140.00 09/17/65 1045	5000	2.18 2750	10.1 105	63.0F	7.9 7.5	105	12 .60 56	2.9 .24 22	4.5 .20 19	1.1 .03 3	0.0 .00	58 .95 90	3.0 .06 6	1.2 .03 3	0.8 .01 1	--	.0	12	68 66	42 0		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH	
A05120.00 10/09/64 5000 1400	34.30 1850	9.2 103	69.0F	7.9 7.7	A05120.00 120	FEATHER RIVER 5.0 .22	BELOW SHANGHAI 0.0 .00	BEND (20a) 70 1.15					1.5 .04	--	--	.0	--	--	52 0	
A05120.00 11/20/64 5000 1230	35.2 2740	11.6 100	48.0F	8.0 7.5	122	5.0 .22	0.0 .00	48 .79					1.4 .04	--	--	.1	--	--	50 11	
A05120.00 12/11/64 5000 1400	35.56 3140	11.4 103	52.0F	7.9 7.3	113	4.7 .20	0.0 .00	62 1.02					1.3 .04	--	--	.0	--	--	46 0	
A05120.00 01/08/65 5000 1500	53.52 51900	12.5 103	45.0F	7.6 7.1	62	2.4 .10	0.0 .00	30 .49					0.6 .02	--	--	.0	--	--	23 0	
A05120.00 02/05/65 5000 1430	42.57 15700	12.0 103	48.0F	7.9 7.3	82	3.3 .14	0.0 .00	42 .69					1.2 .03	--	--	.0	--	--	34 0	
A05120.00 03/15/65 5000 1445	38.97 8150	11.8 107	52.0F	7.5 7.3	87	3.4 .15	0.0 .00	45 .74					1.2 .03	--	--	.0	--	--	37 0	
A05120.00 04/09/65 5000 1330	40.78 11700	11.7 99	47.0F	7.6 7.3	81	3.5 .15	0.0 .00	42 .69					1.0 .03	--	--	.0	--	--	34 0	
A05120.00 05/14/65 5000 0930	40.82 11750	10.7 107	60.0F	7.7 7.3	68	2.1 .17 25	0.2 .01 1	35 .57 86	3.0 .06 9	0.7 .02 3	0.4 .01 2					.0	14	51 48	28 0	
A05120.00 06/18/65 5000 1400	37.01 5000		68.0F	8.0 7.3	80	3.7 .16	0.0 .00	42 .69					0.9 .03	--	--	.0	--	--	34 0	
A05120.00 07/16/65 5000 0830	33.76 1390	7.9 94	76.0F	8.2 7.5	109	4.6 .20	0.0 .00	58 .95					1.6 .05	--	--	.0	--	--	47 0	
A05120.00 08/13/65 5000 1315	34.42 1865	8.1 97	77.0F	8.2 7.3	111	4.7 .20	0.0 .00	61 1.00					1.4 .04	--	--	.0	--	--	47 0	
A05120.00 09/17/65 5000 1300	33.93 1530	9.4 99	65.0F	8.0 7.7	118	3.2 .26 22	1.1 .03 3	64 1.05 89	4.0 .08 7	1.5 .04 3	0.4 .01 1					.0	15	75 75	48 0	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER									
							MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIEQUIVALENT PER LITER					TDS				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH						
A56080.00 FEATHER RIVER, SOUTH FORK, BELOW PONDEROSA DAM (19C)																										
A56080.00 10/14/64 1000			9.9 104	62.0F	7.5 7.3	49	--	--	2.5 .11	--	0.0 .00	24 .39	--	0.8 .02	--	--	.0	--	--	20 1						
A56080.00 11/19/64 1315			10.5 97	51.0F	7.6 7.1	58	--	--	2.9 .13	--	0.0 .00	26 .43	--	0.8 .02	--	--	.0	--	--	22 1						
A56080.00 12/03/64 1500			10.9 101	51.0F	7.3 7.1	56	--	--	3.0 .13	--	0.0 .00	26 .43	--	0.8 .02	1.4 .02	--	.0	--	--	22 1						
A56080.00 01/15/65 0945			12.5 79	43.0F	7.7 7.0	40	--	--	2.3 .10	--	0.0 .00	21 .34	--	0.6 .02	0.2 .00	--	.0	--	38	18 1						
A56080.00 02/09/65 1030	350		12.7 104	42.0F	7.7 7.0	40	--	--	1.8 .08	--	0.0 .00	19 .31	--	0.4 .01	0.4 .01	--	.0	--	30	18 3						
A56080.00 03/12/65 1045	200		12.6 109	46.0F	7.5 7.0	40	--	--	1.8 .08	--	0.0 .00	20 .33	--	0.6 .02	0.3 .00	--	.0	--	33	16 0						
A56080.00 04/02/65 1045			12.4 108	47.0F	7.2 7.1	42	--	--	2.2 .10	--	0.0 .00	21 .34	--	0.8 .02	0.7 .01	--	.0	--	34	16 0						
A56080.00 05/13/65 0945			11.7 111	53.0F	7.5 7.2	41	4.4 .22 54	1.5 .12 29	1.7 .07 17	0.1 .00	0.0 .00	22 .36 88	1.0 .02 5	0.6 .02 5	0.4 .01 2	--	.0	12	34 32	17 0						
A56080.00 06/11/65 1000			10.4 116	67.0F	7.8 7.1	45	--	--	2.3 .10	--	0.0 .00	22 .36	--	0.8 .02	1.2 .02	--	.0	--	37	17 0						
A56080.00 07/08/65 0830			6.0 66	66.0F	7.3 6.8	75	--	--	3.5 .15	--	0.0 .00	39 .64	--	0.8 .02	2.1 .03	--	.1	--	61	28 0						
A56080.00 08/06/65 0930			9.6 112	71.0F	7.7 7.1	45	--	--	2.4 .10	--	0.0 .00	22 .36	--	0.6 .02	--	--	.0	--	--	16 0						
A56080.00 09/03/65 0945			10.5 116	66.0F	7.4 7.2	43	5.0 .25 61	0.4 .03 7	2.8 .12 29	0.3 .01 2	0.0 .00	22 .36 88	1.0 .02 5	0.6 .02 5	0.5 .01 2	--	.0	10	33 31	14 0						

TABLE 0-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
							FEATHER RIVER, WEST BRANCH, NEAR YANKEE HILL (19d)										F	B	SI02	TDS SUM	TH NCH
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						
A52100.00 11/20/64 1045	5000		11.7 100	46.0F	8.1 7.5	A52100.00 119	--	--	3.6 .16	--	0.0 .00	70 1.15	--	0.9 .03	--	--	.0	--	--	55 0	
A52100.00 12/04/64 1030	5000		12.2 101	44.0F	7.5 7.3	62	--	--	2.4 .10	--	0.0 .00	33 .54	--	0.5 .01	0.8 .01	--	.0	--	--	26 0	
A52100.00 01/15/65 1530	5000		12.4 107	47.0F	7.6 7.1	44	--	--	2.3 .10	--	0.0 .00	25 .41	--	0.6 .02	0.4 .01	--	.0	--	41	19 0	
A52100.00 02/05/65 1145	5000		11.7 101	47.0F	7.7 7.1	46	--	--	2.0 .09	--	0.0 .00	25 .41	--	0.2 .01	1.0 .02	--	.0	--	32	19 0	
A52100.00 03/10/65 1230	5000		11.7 101	47.0F	7.7 7.3	51	--	--	2.1 .09	--	0.0 .00	28 .46	--	0.6 .02	0.3 .00	--	.0	--	40	21 0	
A52100.00 04/09/65 1215	5000		12.4 105	45.0F	7.6 7.3	66	--	--	2.1 .09	--	0.0 .00	38 .62	--	0.6 .02	1.0 .02	--	.0	--	50	30 0	
A52100.00 05/13/65 1430	5000		11.1 107	55.0F	7.6 7.3	42	4.2 .21 50	1.7 .14 33	1.7 .07 17	0.1 .00	0.0 .00	23 .38 90	1.0 .02 5	0.4 .01 2	0.5 .01 2	--	.0	12	30 33	18 0	
A52100.00 06/18/65 1030	5000		9.8 101	61.0F	7.9 7.5	62	--	--	2.8 .12	--	0.0 .00	34 .56	--	0.4 .01	0.6 .01	--	.0	--	50	25 0	
A52100.00 07/21/65 1230	5000		8.3 100	75.0F	8.3 8.1	135	--	--	3.5 .15	--	2.0 .07	76 1.25	--	1.3 .04	--	--	.0	--	--	62 0	
A52100.00 08/13/65 1100	5000		8.8 101	71.0F	8.0 7.3	83	--	--	3.3 .14	--	0.0 .00	44 .72	--	0.9 .03	--	--	.0	--	--	34 0	
A52100.00 09/08/65 1000	5000		9.2 113	77.0F	8.2 8.1	148	13 .65 40	9.6 .79 48	4.0 .17 10	0.9 .02 1	0.0 .00	93 1.53 94	3.0 .06 4	1.5 .04 2	0.3 .00	--	.0	18	94 96	72 0	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										MILLIGRAMS PER LITER				
						PERCENT REACTANCE VALUE										TDS SUM				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02			
B95300.00 10/08/64 5000 0945	5.47	7.5 83	69.0F	8.4 7.7	834	--	--	86 3.74	--	4.0 .13	152 2.49	--	141 3.98	--	--	.2	--	--	--	196 65
B95300.00 11/11/64 5000 1200	5.00	8.2 79	57.0F	8.3 7.3	702	--	--	78 3.39	--	2.0 .07	126 2.07	--	110 3.10	--	--	.4	--	--	--	156 49
B95300.00 12/10/64 5000 1200	11.72	8.3 78	55.0F	8.4 7.3	641	--	--	74 3.22	--	3.0 .10	106 1.74	--	101 2.85	--	--	.3	--	--	--	140 48
B95300.00 01/07/65 5000 1100	14.97	9.5 84	50.0F	8.1 7.1	216	--	--	19 .83	--	0.0 .00	56 .92	--	23 .65	--	--	.2	--	--	--	57 11
B95300.00 02/03/65 5000 1230	12.08	10.2 88	48.0F	7.9 7.1	257	--	--	26 1.13	--	0.0 .00	54 .89	--	32 .90	--	--	.1	--	--	--	62 18
B95300.00 03/04/65 5000 1100	11.97	10.5 99	55.0F	8.3 7.3	321	--	--	32 1.39	--	2.0 .07	56 .92	--	45 1.27	--	--	.1	--	--	--	75 26
B95300.00 04/08/65 5000 1415	5.81	10.2 96	55.0F	7.8 7.5	312	--	--	34 1.48	--	0.0 .00	65 1.07	--	42 1.18	--	--	.2	--	--	--	71 18
B95300.00 05/06/65 5000 1000	6.42	10.1 100	59.0F	8.0 7.5	240	16 .80 36	5.1 .42 19	22 .96 43	1.4 .04 2	0.0 .00 0.0	60 .98 44	18 .37 17	31 .87 39	1.4 .02 1	--	.0	17	140 141	61 12	
B95300.00 06/17/65 5000 1015	6.14	8.5 90	65.0F	8.0 7.1	140	--	--	12 .52	--	0.0 .00	36 .59	--	18 .51	--	--	.0	--	--	--	37 8
B95300.00 07/15/65 5000 0920	13.12	9.3 111	77.0F	8.2 8.1	698	--	--	73 3.18	--	0.0 .00	127 2.08	--	124 3.50	--	--	.1	--	--	--	166 62
B95300.00 08/12/65 5000 1130	3.65	7.1 86	78.0F	8.4 8.1	854	--	--	90 3.92	--	4.0 .13	152 2.49	--	154 4.34	--	--	.2	--	--	--	202 71
B95300.00 09/16/65 5000 1000	5.32	11.1 126	72.0F	7.8 8.4	696	38 1.90 29	16 1.32 20	73 3.18 49	3.6 .09 1	0.0 .00 0.0	142 2.33 35	49 1.02 15	113 3.19 48	4.4 .07 1	--	.0	24	412 391	160 44	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
							MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE						MILLIEQUIVALENT PER LITER				F	B	SI02	TDS SUM	TH NCH
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						
A54320.00 11/06/64 1030	5000	2.52 138	10.5 100	46.0F	7.3 7.3	147	A54320.00	INDIAN CREEK	7.1 .31	--	0.0 .00	82 1.34	--	1.3 .04	--	--	.0	--	--	60 0	
A54320.00 01/27/65 0915	5000	6.45 1550	11.4 95	37.0F	7.9 7.0	81	--	--	4.0 .17	--	0.0 .00	42 .69	--	1.3 .04	--	--	.0	--	--	32 0	
A54320.00 03/10/65 1000	5000	5.15 875	11.4 101	41.0F	7.9 7.1	89	--	--	4.1 .18	--	0.0 .00	48 .79	--	0.9 .03	--	--	.0	--	--	37 0	
A54320.00 05/12/65 0945	5000	5.69 1130	10.2 104	51.0F	7.4 7.3	77	9.0 .45 57	2.1 .17 22	3.7 .16 20	0.5 .01 1	0.0 .00	41 .67 88	3.0 .06 8	0.6 .02 3	0.6 .01 1	--	.0	22	63 62	31 0	
A54320.00 07/21/65 1010	5000	2.06 78	7.9 98	68.0F	8.3 7.3	162	--	--	7.5 .33	--	2.0 .07	87 1.43	--	2.2 .06	--	--	.0	--	--	67 0	
A54320.00 09/22/65 0930	5000	2.75 175	9.2 97	54.0F	7.4 7.1	117	13 .65 54	3.5 .29 24	5.3 .23 19	1.5 .04 3	0.0 .00	66 1.08 91	3.0 .06 5	1.4 .04 3	0.4 .01 1	--	.0	24	86 84	47 0	

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER		G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER					
							MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										TDS SUM					TH NCH
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SiO2	TDS			
B95241.20 10/13/64 5000 1300				68.0F	8.0	474	B9 5241.20	--	--	48 2.09	--	0.0 .00	125 2.05	--	58 1.64	--	--	.4	--	--	120 18	
B95241.20 11/18/64 5000 1015				49.0F	8.1	1330	--	--	168 7.31	--	0.0 .00	348 5.71	--	171 4.82	--	--	2.4	--	--	322 37		
B95241.20 12/01/64 5000 1230				58.0F	8.6	1560	--	--	176 7.66	--	28 .93	324 5.31	--	190 5.36	--	--	2.7	--	--	354 42		
B95241.20 01/07/65 5000 1345				51.0F	8.4	936	--	--	109 4.74	--	6.0 .20	180 2.95	--	128 3.61	--	--	1.5	--	--	210 53		
B95241.20 02/08/65 5000 1315				52.0F	8.4	724	--	--	82 3.57	--	2.0 .07	127 2.08	--	104 2.93	--	--	1.2	--	--	166 59		
B95241.20 03/11/65 5000 1400				61.0F	8.4	919	--	--	109 4.74	--	4.0 .13	164 2.69	--	132 3.72	--	--	1.5	--	--	202 61		
B95241.20 04/12/65 5000 1015				56.0F	7.9	659	--	--	78 3.39	--	0.0 .00	116 1.90	--	100 2.82	--	--	.8	--	--	144 49		
B95241.20 05/17/65 5000 1215				72.0F	7.2	327	18 .90 30	8.5 .70 23	32 1.39 46	1.6 .04 1	0.0 .00	71 1.16 37	36 .75 24	42 1.18 38	1.6 .03 1	--	.2	13	182 188	80 22		
B95241.20 06/10/65 5000 1315				74.0F	8.2	357	--	--	36 1.57	--	0.0 .00	76 1.25	--	47 1.33	--	--	.3	--	--	86 24		
B95241.20 07/01/65 5000 0930				77.0F	8.2	310	--	--	31 1.35	--	0.0 .00	74 1.21	--	40 1.13	--	--	.1	--	--	77 17		
B95241.20 08/16/65 5000 1215				79.0F	8.0	293	--	--	28 1.22	--	0.0 .00	83 1.36	--	34 .96	--	--	.2	--	--	74 6		
B95241.20 09/01/65 5000 0845				75.0F	7.4	278	16 .80 30	8.5 .70 26	26 1.13 42	1.6 .04 1	0.0 .00	85 1.39 51	20 .42 15	30 .85 31	3.3 .05 2	--	.2	14	168 161	75 6		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAH SAMPLER	G.P. Q	DC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER					
						AT MOUTH, NEAR BYRON (106)															
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH	NCH	
B95270.20 10/08/64 5000 0855	12.10	7.2 80	70.0F	8.1 7.4	380	19 .95 27	12 .99 28	36 1.57 44	2.6 .07 2	0.0 .00 47	105 1.72 47	26 .54 15	48 1.35 37	1.9 .03 1	--	.1	--	213 197	97 11		
B95270.20 11/05/64 5000 1015	11.92	7.0 72	62.0F	7.5 7.3	440	22 1.10 26	14 1.15 28	43 1.87 45	2.2 .06 1	0.0 .00 43	112 1.84 43	30 .62 15	62 1.75 41	2.4 .04 1	--	.2	--	241 231	114 22		
B95270.20 12/03/64 5000 1120	11.59	8.2 77	55.0F	8.2 7.5	613	26 1.30 24	15 1.23 23	64 2.78 52	3.0 .08 1	0.0 .00 32	108 1.77 32	53 1.10 20	92 2.59 47	2.5 .04 1	--	.5	--	329 309	126 38		
B95270.20 01/08/65 5000 1140	13.91	8.3 74	51.0F	7.8 7.3	751	26 1.30 21	13 1.07 17	89 3.87 62	--	0.0 .00 25	100 1.64 25	64 1.33 21	121 3.41 53	4.9 .08 1	--	1.2	--	412 368	120 38		
B95270.20 02/03/65 5000 1005	12.10	6.9 60	49.0F	7.5 7.7	653	23 1.15 19	12 .99 17	87 3.78 64	--	0.0 .00 26	98 1.61 26	56 1.16 19	116 3.27 54	3.8 .06 1	0.6	1.3	15	368 363	108 28		
B95270.20 03/03/65 5000 1025	11.42	9.1 87	56.0F	7.9 7.3	531	21 1.05 22	10 .82 17	68 2.96 61	1.9 .05 1	0.0 .00 27	80 1.31 27	47 .98 20	90 2.54 52	2.3 .04 1	--	1.2	15	313 296	94 29		
B95270.20 04/08/65 5000 0935		8.9 87	58.0F	7.5 7.5	492	23 1.15 26	13 1.07 24	50 2.18 50	--	0.0 .00 31	86 1.41 31	49 1.02 22	73 2.06 45	5.2 .08 2	--	.5	--	280 256	110 40		
B95270.20 05/06/65 5000 1010	13.12	9.1 92	61.0F	8.2 7.5	268	17 .85 34	6.2 .51 20	26 1.13 45	1.4 .04 2	0.0 .00 40	62 1.02 40	26 .54 21	34 .96 38	0.5 .01 2	--	.1	17	159 159	68 17		
B95270.20 06/17/65 5000 0920	13.17	8.5 92	67.0F	7.4 7.3	165	11 .55 37	3.0 .25 17	15 .65 44	1.2 .03 2	0.0 .00 42	39 .64 42	11 .23 15	22 .62 40	3.3 .05 3	--	.2	--	103 86	40 8		
B95270.20 07/15/65 5000 1245	10.43	7.5 93	81.0F	7.5 7.3	253	--	--	22 .96	--	0.0 .00 1.05	64 1.05	--	32 .90	--	--	.1	--	--	68 16		
B95270.20 08/13/65 5050 1045		8.3 100	77.0F	7.7 7.3	238	15 .75	7.7 .63	21 .91	--	--	--	18 .37	25 .71	0.5 .01	--	.1	--	152	69		
B95270.20 09/17/65 5000 1100			69.0F	8.1 7.4	345	26 1.30 39	6.8 .56 17	32 1.39 42	2.1 .05 2	0.0 .00 43	88 1.44 43	30 .62 19	43 1.21 36	3.9 .06 2	--	.0	18	204 205	93 21		

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME		LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
								MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER							PERCENT REACTANCE VALUE			MILLIGRAMS PER LITER				
								CA	MG	NA	K	C03	HC03	SO4	CL	NO3	F	B	SI02	TDS	TH	
B94120.10 11/09/64 5000 1400				8.5 85	60.0F	8.2 7.3	B9 4120.10 211	--	--	LITTLE 4120.10	POTATO SLOUGH NEAR TERMINOUS (99)	0.0 0.00	85 1.39	--	14 .39	--	--	.1	--	--	71 2	
B94120.10 01/05/65 5000 1400				10.1 89	50.0F	7.3 7.1	305	--	--	--	--	0.0 0.00	48 .79	--	46 1.30	--	--	.1	--	--	96 57	
B94120.10 03/11/65 5000 0930				9.8 90	53.0F	7.8 7.1	143	--	--	--	--	0.0 0.00	49 .80	--	13 .37	--	--	.0	--	--	48 8	
B94120.10 05/17/65 5000 1430				9.3 99	66.0F	7.0 7.1	98	8.2 .41 45	2.8 .23 25	5.7 .25 27	0.8 .02 2	0.0 0.00	30 .49 52	4.0 .08 9	12 .34 36	1.7 .03 3	--	.0	13	49 63	32 8	
B94120.10 07/02/65 5000 1345				8.1 95	73.0F	8.1 7.3	160	--	--	--	--	0.0 0.00	58 .95	--	13 .37	--	--	.0	--	--	54 7	
B94120.10 09/07/65 5000 0845				7.0 76	68.0F	7.5 7.1	214	15 .75 34	8.4 .69 32	16 .70 32	1.4 .04 2	0.0 0.00	88 1.44 66	10 .21 10	17 .48 22	3.2 .05 2	--	.0	19	127 133	72 0	

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
McCLOUD RIVER ABOVE SHASTA LAKE (STA. 18)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH at 25°C	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by						
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents					
10/5/64 1015	882	50	11.3	104	97	7.9 8.0	0.74 ^c	5.5 0.24				0 0.00	54 0.89			0.9 0.03			0.0		24	37	0	1				USGS	
11/10 1035	1390	45	11.1	96	98	7.4 8.0	0.76 ^c	5.0 0.22				0 0.00	52 0.85			1.1 0.03			0.0		22	38	0	4					
12/7 1000	1070	46	10.9	95	102	7.5 8.1	0.78 ^c	5.2 0.23				0 0.00	58 0.95			0.9 0.03			0.0		23	39	0	1					
1/65	Inaccessible																												
2/2 1020	2290	43	11.5	96	94	7.4 7.8	0.79 ^c	4.3 0.19				0 0.00	50 0.82			0.6 0.02			0.0		19	40	0	6					
3/2 1010	1550	44	11.4	97	96	7.7 7.5	0.79 ^c	4.0 0.17				0 0.00	52 0.85			0.6 0.02			0.0		18	40	0	4					
4/	Inaccessible																												
5/3 1045	2390	47	11.7	103	87	7.4 7.8	1.1 0.55	3.7 0.16	0.5 0.01			0 0.00	48 0.79	3.0 0.06		0.6 0.02	1.1 0.02		0.0	25	69 ^f	18	37	0	7	ABS 0.0 As 0.00 PO ₄ 0.05			
6/	Inaccessible																												
7/	Inaccessible																												
8/10 0930	1138	75	8.9	108	124	8.3 8.2	0.92 ^c	7.1 0.31				0 0.00	67 1.10			2.4 0.07			0.1		25		46	0	3				
9/14 1020	1084	53	11.2	107	96	7.7 8.1	0.8 0.44	5.3 0.23	1.1 0.03			0 0.00	54 0.89	1.0 0.02		0.9 0.03	2.7 0.04		0.0	35	76 ^f	23	36	0	1	ABS 0.0 As 0.00 PO ₄ 0.10			

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MILL CREEK NEAR MOUTH (STA. 88)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent lead - in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.P. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER								
						MINERAL CONSTITUENTS IN										PERCENT REACTANCE VALUE				F	H	SI02	TDS SUM	TH NCH
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NH3										
NOKEJUNE RIVER AT IANCHA PLANA (41 Camanche Dam) (23a)																								
B21170.00 11/16/64 5000 1045	4.52 1340	9.9 94	55.0F	7.5 7.1	42	--	--	2.8 .12	--	0.0 .00	16 .26	--	1.2 .03	--	--	.1	--	--	14 1					
B21170.00 01/11/65 5000 1345		12.5 109	48.0F	7.4 7.0	42	--	--	3.0 .13	--	0.0 .00	18 .30	--	0.8 .02	--	--	.1	--	--	15 0					
B21170.00 03/01/65 5000 1315	5.35 1900	12.3 111	51.0F	7.5 7.0	43	--	--	2.3 .10	--	0.0 .00	18 .30	--	1.3 .04	--	--	.0	--	--	16 1					
B21170.00 05/18/65 5000 1300	6.89 1910	11.8 112	55.0F	7.1 6.5	45	4.4 .22 49	1.2 .10 22	2.8 .12 27	0.5 .01 2	0.0 .00	20 .33 75	3.0 .06 14	1.3 .04 9	0.6 .01 2	--	.0	11	38 35	16 0					
B21170.00 07/01/65 5000 0900	5.66 1000	11.4 112	58.0F	7.7 7.1	45	--	--	2.7 .12	--	0.0 .00	20 .33	--	1.2 .03	--	--	.0	--	--	16 0					
B21170.00 09/02/65 5000 1215	4.68 440	11.5 119	62.0F	8.5 7.1	45	5.2 .26 55	1.2 .10 21	2.1 .09 19	0.7 .02 4	2.0 .07 16	18 .30 67	2.0 .04 9	1.3 .04 9	0.3 .00	--	.0	8.4	32 32	18 0					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME		LAB SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER										MILLIGRAMS PER LITER					
								PERCENT REACTANCE VALUE										TDS SUM					TH NCH
								CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02				
B9 4300.00 MOLELUNNE RIVER AT WOODBRIDGE (23)																							
B9 4300.00																							
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TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME SAMPLER	G.P. C	EC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER					
						AT CLIFTON COURT FERRY (104)										F	H	S102	SUM	TDS	TH
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3							
B95340.00 10/08/64 5200 1100	3.62	7.3 84	73.0F	8.1 7.3	400	B95340.00	--	38 1.65	--	0.0 .00	109 1.79	--	50 1.41	--	--	.1	--	--	106 17		
B95340.00 11/11/64 5000 1315	4.35	8.3 80	57.0F	8.2 7.5	779	--	--	90 3.92	--	0.0 .00	134 2.20	--	126 3.55	--	--	.4	--	--	168 58		
B95340.00 12/10/64 5000 1345	12.05	7.9 73	54.0F	8.2 7.3	631	--	--	66 2.87	--	0.0 .00	106 1.74	--	96 2.71	--	--	.4	--	--	136 49		
B95340.00 01/07/65 5000 1300	13.86	9.5 84	50.0F	8.0 7.1	230	--	--	21 .91	--	0.0 .00	58 .95	--	24 .68	--	--	.2	--	--	59 12		
B95340.00 02/03/65 5000 1345	11.10	10.0 86	48.0F	8.1 7.1	291	--	--	30 1.31	--	0.0 .00	62 1.02	--	36 1.02	--	--	.2	--	--	69 18		
B95340.00 03/04/65 5000 1315	10.34	10.3 99	57.0F	8.0 7.3	325	--	--	32 1.39	--	0.0 .00	60 .98	--	46 1.30	--	--	.1	--	--	76 27		
B95340.00 04/08/65 5000 1315	6.90	10.1 95	55.0F	7.7 7.5	305	--	--	31 1.35	--	0.0 .00	62 1.02	--	43 1.21	--	--	.1	--	--	72 21		
B95340.00 05/06/65 5000 1200	5.22	10.1 102	61.0F	7.9 7.5	300	18 .90 32	7.1 .58 20	30 1.31 46	1.4 .04 1	0.0 .00	66 1.08 38	31 .64 22	40 1.13 40	0.6 .01	--	.1	17	175 178	74 20		
B95340.00 06/17/65 5000 1215	4.32	8.4 90	66.0F	7.9 7.3	146	--	--	12 .52	--	0.0 .00	36 .59	--	19 .54	--	--	.0	--	--	39 10		
B95340.00 07/15/65 5000 1035	11.44	6.5 79	78.0F	7.6 7.3	236	--	--	19 .83	--	0.0 .00	63 1.03	--	28 .79	--	--	.0	--	--	71 20		
B95340.00 08/12/65 5000 1245	2.68	6.7 74	69.0F	8.3 8.1	307	--	--	28 1.22	--	1.0 .03	81 1.33	--	40 1.13	--	--	.1	--	--	83 15		
B95340.00 09/16/65 5000 1145	5.55	7.3 84	73.0F	7.7 7.5	313	24 1.20 40	6.8 .56 18	28 1.22 40	1.8 .05 2	0.0 .00	83 1.36 45	28 .58 19	36 1.02 34	3.0 .05 2	--	.0	15	180 183	88 20		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME SAMPLER	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						MILLIEQUIVALENT PER LITER										TDS				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH	NCH
						RIVER AT MANDEVILLE ISLAND (112)														
895110.20 10/13/64 5000 1145	6.55	8.9 91	62.0F	8.0 7.7	274	H9 5110.20	--	--	22 .96	--	0.0 .00	95 1.56	--	26 .73	--	--	.1	--	--	83 5
895110.20 11/16/64 5000 1430	5.90	9.8 90	53.0F	8.2 7.5	368	--	--	--	32 1.39	--	0.0 .00	100 1.64	--	45 1.27	--	--	.1	--	--	107 25
895110.20 12/01/64 5000 1230	5.46	9.1 85	54.0F	8.2 7.3	489	--	--	--	44 1.91	--	0.0 .00	106 1.74	--	64 1.80	--	--	.3	--	--	119 32
895110.20 01/11/65 5000 1100	7.77	9.1 80	50.0F	8.0 7.1	315	--	--	--	26 1.13	--	0.0 .00	55 .90	--	35 .99	--	--	.2	--	--	85 40
895110.20 02/08/65 5000 1130	6.40	10.3 91	50.0F	8.0 7.1	312	--	--	--	28 1.22	--	0.0 .00	62 1.02	--	38 1.07	--	--	.4	--	--	82 31
895110.20 03/11/65 5000 1300	5.72	10.0 96	57.0F	7.9 7.3	302	--	--	--	28 1.22	--	0.0 .00	60 .98	--	39 1.10	--	--	.1	--	--	78 29
895110.20 04/01/65 5000 1245	3.60	11.1 112	61.0F	7.7 7.3	284	--	--	--	26 1.13	--	0.0 .00	60 .98	--	36 1.02	--	--	.1	--	--	76 27
895110.20 05/17/65 5000 1015	4.44	8.7 85	58.0F	7.4 7.3	182	12 .60 36	5.4 .44 26	14 .61 36	1.4 .04 2	0.0 .00	52 .85 48	16 .33 19	20 .56 32	1.8 .03 2	--	--	.1	14	101 110	52 10
895110.20 06/10/65 5000 1200	3.10	8.6 99	73.0F	8.1 7.3	200	--	--	17 .74	--	0.0 .00	54 .89	--	22 .62	--	--	--	.0	--	--	56 12
895110.20 07/02/65 5000 1030	5.00	7.8 90	73.0F	8.1 7.3	168	--	--	12 .52	--	0.0 .00	58 .95	--	15 .42	--	--	--	.0	--	--	54 7
895110.20 08/02/65 5000 1215	4.03	8.1 96	76.0F	8.4 7.5	198	--	--	16 .70	--	1.0 .03	67 1.10	--	20 .56	--	--	--	.1	--	--	58 2
895110.20 09/07/65 5000 1100	2.65	7.9 89	71.0F	7.5 7.5	218	20 1.00 46	4.6 .38 18	17 .74 34	1.8 .05 2	0.0 .00	82 1.34 61	15 .31 14	19 .54 24	1.0 .02 1	--	--	.0	17	131 136	69 2

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.P. Q	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						PERCENT REACTANCE VALUE														
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH	
B95320.20 10/12/64 5000 1330		7.6 85	68.0F	7.5 7.4	B95320.20 321	OLD RIVER AT ORWOOD BRIDGE (108)	--	--	30 1.31	--	0.0 .00	103 1.69	--	37 1.04	--	.1	--	--	91 7	
B95320.20 11/18/64 5000 0945		9.0 80	50.0F	8.1 7.4	775	--	--	84 3.65	--	0.0 .00	124 2.03	--	119 3.36	--	--	.4	--	--	166 65	
B95320.20 12/01/64 5000 1400		8.4 79	55.0F	8.1 7.3	501	--	--	52 2.26	--	0.0 .00	90 1.48	--	71 2.00	--	--	.3	--	--	115 41	
B95320.20 01/11/65 5000 0945		9.6 83	48.0F	7.7 7.0	185	--	--	14 .61	--	0.0 .00	46 .75	--	17 .48	--	--	.2	--	--	52 15	
B95320.20 02/08/65 5000 1345		9.8 88	51.0F	8.0 7.3	406	--	--	41 1.78	--	0.0 .00	67 1.10	--	54 1.52	--	--	.6	--	--	97 42	
B95320.20 03/11/65 5000 1430		9.0 89	59.0F	8.0 7.1	317	--	--	30 1.31	--	0.0 .00	56 .92	--	43 1.21	--	--	.1	--	--	75 29	
B95320.20 04/12/65 5000 0930		10.1 95	55.0F	7.6 7.3	284	--	--	29 1.26	--	0.0 .00	59 .97	--	38 1.07	--	--	.1	--	--	69 21	
B95320.20 05/17/65 5000 1245		7.7 86	70.0F	7.3 7.3	264	16 .80 33	6.8 .56 23	24 1.04 43	1.5 .04 2	0.0 .00 0.0	61 1.00 39	28 .58 23	33 .93 37	1.8 .03 1	--	.1	14	156 155	68 18	
B95320.20 06/10/65 5000 1345		7.4 84	72.0F	8.1 7.2	259	--	--	23 1.00	--	0.0 .00	60 .98	--	33 .93	--	--	.1	--	--	67 18	
B95320.20 07/02/65 5000 0845		7.4 87	75.0F	7.7 7.3	203	--	--	18 .78	--	0.0 .00	58 .95	--	24 .68	--	--	.0	--	--	58 11	
B95320.20 09/01/65 5000 0915		6.8 80	75.0F	7.7 7.7	229	16 .80 36	6.6 .54 24	19 .83 38	1.6 .04 2	0.0 .00 0.0	80 1.31 59	13 .27 12	22 .62 28	1.4 .02 1	--	.1	14	146 133	67 2	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.P. Q	CC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH	
B95380.00 10/08/64 5000 1030	6.47	8.3 92	65.0F	8.2 8.1	1270	B95380.00	--	139 6.05	--	0.0 .00	216 3.54	--	222 6.26	--	--	--	.4	--	--	304 127
B95380.00 11/11/64 5000 1245	5.88	7.4 71	56.0F	7.8 7.5	854	--	--	94 4.09	--	0.0 .00	149 2.44	--	129 3.64	--	--	--	.6	--	--	182 60
B95380.00 12/10/64 5000 1300	12.00	5.1 48	55.0F	7.2 7.3	745	--	--	78 3.39	--	0.0 .00	127 2.08	--	110 3.10	--	--	--	.4	--	--	162 58
B95380.00 01/07/65 5000 1130	15.01	9.2 81	50.0F	7.5 7.1	276	--	--	24 1.04	--	0.0 .00	60 .98	--	33 .93	--	--	--	.1	--	--	70 21
B95380.00 02/03/65 5000 1315	12.14	9.6 63	48.0F	8.0 7.1	344	--	--	34 1.48	--	0.0 .00	70 1.15	--	44 1.24	--	--	--	.1	--	--	81 24
B95380.00 03/04/65 5000 1130	5.10	9.5 89	55.0F	8.0 7.3	358	--	--	34 1.48	--	0.0 .00	64 1.05	--	51 1.44	--	--	--	.2	--	--	83 31
B95380.00 04/08/65 5000 1345	6.12	10.1 95	55.0F	7.6 7.3	410	--	--	43 1.37	--	0.0 .00	78 1.28	--	58 1.64	--	--	--	.2	--	--	97 33
B95380.00 05/06/65 5000 1030	6.48	10.8 107	59.0F	7.6 7.9	358	20 1.00 30	8.8 .72 22	36 1.57 47	1.9 .05 1	0.0 .00	74 1.21 36	34 .71 21	49 1.38 41	1.8 .03 1	--	213 205	.1	17	86 26	
B95380.00 06/17/65 5000 1100	6.19	8.2 87	65.0F	7.1 7.1	217	--	--	18 .78	--	0.0 .00	46 .75	--	32 .90	--	--	--	.0	--	--	57 20
B95380.00 07/15/65 5000 0950	13.12	8.7 105	78.0F	8.3 7.9	698	--	--	71 3.09	--	3.0 .10	119 1.95	--	124 3.50	--	--	--	.2	--	--	166 64
B95380.00 08/12/65 5000 1200	3.85	5.8 69	77.0F	8.3 7.9	939	--	--	99 4.31	--	2.0 .07	166 2.72	--	174 4.91	--	--	--	.2	--	--	228 89
B95380.00 09/16/65 5000 1045	5.31	10.4 118	72.0F	7.9 8.7	789	43 2.15 29	19 1.56 21	82 3.57 48	4.4 .11 1	0.0 .00	154 2.53 34	60 1.25 17	129 3.64 49	4.6 .07 1	--	480 439	.1	21	184 58	

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
PAYNES CREEK NEAR RED BLUFF (STA. 88g)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by	
						equivalents per million																	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)								Boron (B)
10/7/64 1500	15	66	9.5	102	253	7.4 8.2	1.62 ^c	21.4 0.91		0	124 2.03		20.5 0.56			0.5			36	81	0	1	USGS
11/12 1800	38	52	9.6	88	128	7.4 7.9	0.92 ^c	7.8 0.34		0	72 1.18		4.4 0.12			0.2			27	46	0	7	
12/9 1520	20	55	9.8	93	200	7.4 8.2	1.42 ^c	15.4 0.65		0	105 1.72		10.5 0.28			0.3			31	71	0	1	
1/14/65 1215	75	47	10.5	90	110	7.3 8.2	0.84 ^c	7.0 0.30		0	58 0.95		2.5 0.07			0.1			26	42	0	4	
2/4 1620	30	50	8.4	75	150	7.3 8.2	1.08 ^c	10.4 0.44		0	78 1.28		5.8 0.16			0.2			29	54	0	2	
3/4 1620	30	58	8.7	86	172	8.2 8.8	1.20 ^c	12.5 0.52		13 0.43	64 1.05		7.0 0.20			0.2			30	60	0	6	
4/8 1630	55	53	9.7	90	76	7.1 7.6	0.61 ^c	3.9 0.17		0	42 0.69		1.1 0.03			0.0			22	30	0	6	
5/6 0910	70	62	9.2	95	162	7.8 8.2	0.65	11.4 0.48	1.4 0.04	0	85 1.39	2.0 0.04	6.0 0.17	1.7 0.03	0.2	46.1 ABS 0.0 As 0.00 PO ₄ 0.15		125 ^f	28	59	0	2	
6/2 1230	20	69	8.4	94	178	8.0 8.4	1.24 ^c	13.5 0.57		2	88 1.44		8.6 0.24			0.2			31	62	0	1	
7/15 1800	15	77	8.2	99	191	7.9 8.4	1.32 ^c	13.5 0.57		2	88 1.44		12.5 0.34			0.2			30	66	0	2	
8/12 1725	15	75	8.6	102	225	7.8 8.5	1.50 ^c	17.4 0.74		4	105 1.72		16.5 0.45			0.4			33	75	0	1	
9/8 1500	10	72	13.6	157	208	8.2 8.6	0.60	16.4 0.70	1.1 0.03	8	91 1.49	1.0 0.02	13.5 0.37	0.4 0.01	0.3	45.1 ABS 0.0 As 0.00 PO ₄ 0.08		159 ^f	32	72	0	1	

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
PIT RIVER NEAR CANBY (STA. 17a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by		
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tro- ate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/6/64 1710	84	65	9.6	117	327	8.0 8.0	1.92 ^c		34.1 1.48		0 0.00	168 2.75		10.1 0.28		0.3			44	96	0	20	Median 1380	USGS
11/12 0845	82	38	11.5	100	284	8.1 8.3	1.72 ^c		27.1 1.17		2 0.07	153 2.51		7.1 0.20		0.0			40	86	0	20	Maximum 24000	
12/9 0920	185	40	8.8	79	279	7.6 8.3	1.60 ^c		26.1 1.13		2 0.07	142 2.33		6.1 0.17		0.1			41	80	0	30	Minimum .62	
1/19/65 1230	1000	34	11.0	90	195	7.4 7.9	1.26 ^c		16.1 0.70		0 0.00	91 1.49		5.9 0.17		0.1			36	63	0	40		
2/4 0845	1800	37	10.5	90	161	7.4 7.9	1.04 ^c		14.1 0.61		0 0.00	76 1.25		4.0 0.11		0.1			37	52	0	40		
3/4 0840	395	42	7.9	73	189	7.7 8.2	1.22 ^c		14.1 0.61		0 0.00	91 1.49		3.7 0.10		0.2			33	61	0	30		
4/8 0900	415	45	9.7	93	185	7.7 8.0	1.28 ^c		14.1 0.61		0 0.00	92 1.51		4.0 0.11		0.0			32	64	0	30		
5/5 1145	792	49	8.5	86	147	7.7 8.1	1.31 0.65	4.5 0.37	10.1 0.44	2.3 0.06	0 0.00	78 1.28	7.0 0.15	1.9 0.05	1.1 0.02	0.0	29.1 0.20	108 ^f	29	51	0	30		
6/16 0930	385	56	6.9	76	222	7.8 8.3	1.56 ^c		17.1 0.74		2 0.07	126 2.07		2.4 0.07		0.1			32	78	0	35		
7/15 0915	32	69	7.7	99	208	7.8 8.3	1.38 ^c		18.1 0.78		2 0.07	108 1.77		4.9 0.14		0.0			36	69	0	25		
8/12 1110	137	66	7.4	92	221	7.6 8.2	1.42 ^c		18.1 0.78		0 0.00	119 1.95		4.5 0.13		0.2			35	71	0	30		
9/16 0900	222	58	8.1	92	269	8.1 7.7	21.1 1.05	8.1 0.67	24.1 1.04	5.9 0.15	0 0.00	154 2.52	9.0 0.19	4.2 0.12	2.9 0.05	0.1	36.1 0.52	207 ^f	36	86	0	30		

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PIT RIVER NEAR MONTGOMERY CREEK (STA. 17)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in equivalents per million												Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Baron (B)	Silica (SiO ₂)			Other constituents				
10/9/64 0840	750	58	9.7	98	161	8.0 8.1	1.14 ^c		12.5 0.52		0 0.00	91 1.49		3.4 0.10		0.1		57	0	1		USGS		
11/9 1030		51	10.7	100	156	7.8 8.1	1.10 ^c		11.5 0.48		0 0.00	84 1.38		3.1 0.09		0.0		55	0	30				
12/10 1430	3350	47	10.2	90	168	7.5 8.1	1.10 ^c		12 0.52		0 0.00	93 1.52		3.0 0.08		0.1		55	0	4				
1/65	Inaccessible																							
2/1 1230		44	11.7	99	132	7.3 7.9	0.96 ^c		9.4 0.41		0 0.00	68 1.11		2.5 0.07		0.0		48	0	35				
3/1 1100		45	10.2	88	147	7.6 8.2	1.06 ^c		9.7 0.42		0 0.00	80 1.31		2.2 0.06		0.1		53	0	25				
4/5 1235		52	9.5	90	140	7.8 8.0	1.02 ^c		9.4 0.41		0 0.00	79 1.29		2.3 0.06		0.0		51	0	16				
5/5 0935		56	9.5	94	130	7.2 8.0	1.3 0.65	4.3 0.35	7.8 0.34	1.5 0.04	0 0.00	74 1.21	3.0 0.06	2.0 0.06	1.6 0.03	0.0	29	98 ^f	0	15				
6/3 0835		62	8.1	86	155	8.0 8.4	1.10 ^c		11 0.48		2 0.07	83 1.36		2.5 0.07		0.1		55	0	5				
7/6 1345		67	9.6	108	164	7.7 7.9	1.18 ^c		11 0.48		0 0.00	92 1.51		2.9 0.08		0.0		59	0	10				
8/12 0915		68	8.0	91	155	7.7 8.2	1.10 ^c		10 0.44		0 0.00	87 1.43		0.2 0.01		0.1		55	0	2				
9/7 1120		66	9.1	101	163	8.0 8.2	1.3 0.65	6.2 0.51	11 0.48	2.6 0.07	0 0.00	92 1.51	4.0 0.08	3.5 0.10	2.3 0.04	0.1	32	108 ^f	0	5				

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

PIT RIVER, SOUTH FORK NEAR LIKELY (STA. 18a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by				
			ppm	%Sat			equivalents per million																				
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents			
10/7/64 0800	30	55	9.0	100	141	8.0 8.1	1.08 ^c	8.5 0.37			0 0.00	83 1.36		1.2 0.03			0.0				54	0	20				USGS
11/12 1040	35	37	10.9	94	108	7.7 8.0	0.82 ^c	5.6 0.24			0 0.00	64 1.05		0.6 0.02			0.0				41	0	3				
12/9 1050	95	38	10.2	90	120	7.7 7.6	0.90 ^c	6.6 0.29			0 0.00	65 1.07		0.9 0.03			0.1				45	0	10				
1/20/65 1000	85	37	11.0	96	109	7.5 7.7	0.88 ^c	5.4 0.23			0 0.00	63 1.03		1.0 0.03			0.0				44	0	4				
2/4 1005	138	37	9.7	85	118	7.5 7.9	0.88 ^c	7.5 0.33			0 0.00	65 1.07		1.3 0.04			0.0				44	0	40				
3/4 0955	48	40	10.2	92	112	7.9 7.8	0.90 ^c	5.5 0.24			0 0.00	64 1.05		0.5 0.01			0.0				45	0	5				
4/8 1000	597	45	8.3	81	115	7.8 7.9	0.90 ^c	6.9 0.30			0 0.00	66 1.08		0.9 0.03			0.0				45	0	6				
5/5 1305	405	47	9.4	94	91	7.6 7.8	1.1 0.55	4.9 0.21		1.8 0.05	0 0.00	48 0.79	2.0 0.04	0.9 0.03	1.9 0.03		0.0	29	ABS 0.1 As PO ₄ 0.15		35	0	30				
6/17 0830	210	49	7.8	80	88	7.5 8.1	0.71 ^c	4.2 0.18			0 0.00	50 0.82		0.3 0.01			0.1				36	0	5				
7/15 1130	53	65	8.9	111	99	8.2 8.1	0.84 ^c	4.9 0.21			0 0.00	58 0.95		0.5 0.01			0.0				42	0	5				
8/12 1245	18	66	8.5	107	124	8.1 8.2	0.92 ^c	7.0 0.30			0 0.00	70 1.15		5.6 0.16			0.0				46	0	30				
9/16 1000	72	59	9.6	112	136	8.1 8.2	1.2 0.60 ^c	4.6 0.38		3.1 0.08	0 0.00	76 1.25	4.0 0.08	1.2 0.03	1.9 0.03		0.1	32	ABS 0.0 As PO ₄ 0.25		49	0	25				

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
RED BANK CREEK NEAR RED BLUFF (STA. 88a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃			Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.P. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SiO2	TDS SUM	TH NCH	
B95220.00 10/08/64 5000 1230	3.67	7.4 83	70.0F	8.0 7.4	301	B95220.00	ROCK SLOUGH	NEAR KNIGHTSEN (109)	0.0 0.0	100 1.64	32 .90	--	--	--	--	.1	--	--	--	86 4
B95220.00 11/11/64 5000 1400	5.40	8.7 84	57.0F	8.2 7.3	389	--	--	38 1.65	--	0.0 0.0	106 1.74	48 1.35	--	--	--	.2	--	--	--	102 15
B95220.00 12/10/64 5000 1430	11.37	8.2 77	55.0F	8.4 7.3	688	--	--	75 3.26	--	4.0 .13	116 1.90	109 3.07	--	--	--	.6	--	--	--	153 52
B95220.00 01/07/65 5000 1430	13.15	9.9 87	50.0F	7.9 7.3	497	--	--	54 2.35	--	0.0 0.0	75 1.23	68 1.92	--	--	--	.4	--	--	--	108 47
B95220.00 02/03/65 5000 1430	11.48	8.0 69	48.0F	8.2 7.1	616	--	--	70 3.05	--	0.0 0.0	98 1.61	87 2.45	--	--	--	.8	--	--	--	140 60
B95220.00 03/04/65 5000 1415	3.67	8.9 87	58.0F	8.1 7.3	513	--	--	54 2.35	--	0.0 0.0	88 1.44	73 2.06	--	--	--	.4	--	--	--	116 44
B95220.00 04/07/65 5000 1400	4.22	8.5 83	58.0F	7.4 7.3	473	--	--	50 2.18	--	0.0 0.0	79 1.30	67 1.89	--	--	--	.3	--	--	--	111 46
B95220.00 05/06/65 5000 1300	4.17	8.6 84	58.0F	7.4 7.3	243	15 .75 33	6.4 .53 23	22 .96 42	1.2 .03 1	0.0 0.0 0.0	62 1.02 44	23 .48 21	28 .79 34	1.3 .02 1	--	.1	14	147 141	64 13	
B95220.00 06/17/65 5000 1315	3.43	7.0 80	72.0F	8.2 7.3	294	--	--	29 1.26	--	0.0 0.0	68 1.12	38 1.07	--	--	--	.1	--	--	--	72 16
B95220.00 07/15/65 5000 1350	2.34	7.0 87	81.0F	8.1 7.3	210	--	--	16 .70	--	0.0 0.0	68 1.12	20 .56	--	--	--	.0	--	--	--	62 6
B95220.00 08/12/65 5000 1330	2.23	6.1 72	76.0F	8.4 7.3	268	--	--	25 1.09	--	2.0 .07	80 1.31	30 .85	--	--	--	.1	--	--	--	73 4
B95220.00 09/16/65 5000 1245	4.68	7.4 84	72.0F	7.9 7.5	236	18 .90 39	6.3 .52 23	19 .83 36	1.8 .05 2	0.0 0.0 0.0	84 1.38 58	17 .35 15	22 .62 26	1.3 .02 1	--	.0	15	143 142	71 2	

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT BEND (STA. 12c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH at 25°C	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sed- iment	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i	
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/8/64 0800	5,610	58	10.0	98	124	7.3 8.1	1.02 ^c		6.5 0.28		0 0.00	71 1.16		2.0 0.06	2.0 0.03		0.1			51	0	1	Median 341.	USGS
11/9 1340	7,970	55	9.6	91	133	7.1 8.0	1.00 ^c		7.1 0.31		0 0.00	61 1.00		4.4 0.12	4.1 0.07		0.0			50	0	25	Maximum 24,000	
12/10 0930	5,480	52	10.2	93	157	7.3 8.1	1.16 ^c		8.4 0.37		0 0.00	75 1.23		4.0 0.11	1.2 0.02		0.0			58	0	1	Minimum 6.2	
1/14/65 1415	25,800	48	9.7	84	122	7.2 7.8	0.96 ^c		6.4 0.28		0 0.00	59 0.97		2.3 0.06	1.8 0.03		0.0			48	0	70		
2/1 1500	25,000	47	11.4	98	116	7.2 8.1	0.90 ^c		5.5 0.24		0 0.00	59 0.97		1.2 0.03	1.2 0.02		0.0			45	0	60		
3/1 1420	6,340	49	9.8	86	133	7.3 8.1	1.04 ^c		5.9 0.26		0 0.00	63 1.03		2.4 0.07	1.3 0.02		0.0			52	0	20		
4/5 1500	5,980	53	8.8	82	135	7.4 7.9	1.06 ^c		7.0 0.30		0 0.00	64 1.05		3.4 0.10	0.8 0.01		0.0			53	1	20		
5/6 1235	7,670	53	10.0	93	133	7.4 8.0	1.11 ^c 0.55	6.0 0.49	6.4 0.28	0.9 0.02	0 0.00	64 1.05	10. 0.21	2.8 0.08	0.6 0.01		0.0	22.		52	0	20	96 ^f	
6/14 0930	9,150	54	9.5	89	121	7.4 8.1	0.96 ^c		6.0 0.26		0 0.00	60 0.98		2.8 0.08	1.2 0.02		0.0			48	0	25		
7/12 1530	9,230	56	10.9	105	117	7.6 8.2	0.90 ^c		5.9 0.26		0 0.00	61 1.00		2.1 0.06	2.2 0.04		0.0			45	0	3		
8/9 1600	11,600	56	10.9	105	112	7.4 8.2	0.88 ^c		5.1 0.22		0 0.00	59 0.97		2.2 0.06	2.4 0.04		0.1			44	0	15		
9/13 1230	9,520	54	10.7	100	115	7.4 7.7	10. 0.50	4.9 0.40	5.4 0.23	1.2 0.03	0 0.00	59 0.97	5.0 0.10	2.0 0.06	2.3 0.04		0.0	21.		45	0	5	83 ^f	

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent lead - in ppm	Hardness as CaCO ₃ in ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by											
			equivalents per million																											
			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents										
			ppm	%Sat	pH at 25°C	a	b																							
10/5/64 1600	5,360	67	9.7	105	145	7.8	7.8	1.12 ^c		6.7 0.29					77 1.26					2.3 0.06		0.0			21	56	0	1		USGS
11/11 1615	19,000	51	10.3	92	117	-	7.6	0.88 ^c		5.7 0.25					47 0.77					3.6 0.10		0.1			22	44	5	180		
12/9 1345	5,360	53	10.4	95	177	7.6	7.9	1.32 ^c		9.3 0.40					82 1.34					5.9 0.17		0.1			23	66	0	4		
1/13/65 1130	41,200	49	10.8	94	140	7.4	8.2	1.14 ^c		6.6 0.29					67 1.10					3.1 0.09		0.1			20	57	2	80		
2/2 1040	32,800	48	10.8	93	135	7.3	7.8	1.08 ^c		6.4 0.28					65 1.07					2.1 0.06		0.1			21	54	1	100		
3/1 1120	8,900	54	10.0	93	164	7.3	7.7	1.31 ^c		7.5 0.33					80 1.31					4.3 0.12		0.0			20	66	0	30		
4/5 1325	7,380	55	9.9	93	154	7.4	8.0	1.22 ^c		7.5 0.33					72 1.18					4.3 0.12		0.1			21	61	2	20		
5/3 1225	9,210	59	9.7	96	152	7.4	7.8	1.4 0.70	6.6 0.54	7.0 0.30	0.9 0.02				73 1.20	11 0.23				3.6 0.10	21	0.1 PO ₄	0.1 As 0.05	104 ^f	62	2	2	30		
6/16 1230	7,140	65	10.0	105	136	7.3	8.5	1.08 ^c		6.9 0.30					64 1.05					3.0 0.08		0.2			22	54	0	20		
7/14 1155	8,660	68	9.5	104	126	7.3	8.2	0.96 ^c		6.9 0.30					64 1.05					2.5 0.07		0.0			24	48	0	12		
8/11 1320	9,820	64	9.4	98	121	7.3	8.4	0.96 ^c		6.2 0.27					64 1.05					2.4 0.07		0.0			22	48	0	14		
9/15 1245	8,640	65	9.8	103	124	7.4	7.7	1.1 0.55	5.2 0.43	6.0 0.26	0.9 0.02				65 1.07	4.0 0.08				2.6 0.07	20	0.0 PO ₄	0.0 As 0.04	83 ^f	49	0	0	5		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT COLUSA (STA. 13b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH $\frac{a}{b}$	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹
			ppm	%Sat			equivalents per million																
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)			
10/5/64 1315	17,500	66	9.2	98	142	$\frac{7.6}{7.8}$	$\frac{1.12^c}{1.12^c}$		$\frac{7.5}{0.33}$		$\frac{0}{0.00}$	$\frac{76}{1.25}$		$\frac{3.0}{0.08}$		$\frac{0.1}{0.1}$		23	56	0	1	Median 230.	USGS
11/11 1455	22,000	51	10.0	89	114	$\frac{7.4}{7.4}$	$\frac{0.88^c}{0.88^c}$		$\frac{0.24}{0.24}$		$\frac{0}{0.00}$	$\frac{44}{0.72}$		$\frac{4.9}{0.14}$		$\frac{0.0}{0.0}$		21	44	8	280	Maximum 620.	
12/9 1205	5,740	53	10.6	97	179	$\frac{7.5}{8.2}$	$\frac{1.10^c}{1.10^c}$		$\frac{9.8}{0.43}$		$\frac{0}{0.00}$	$\frac{82}{1.34}$		$\frac{6.4}{0.18}$		$\frac{0.0}{0.0}$		24	67	0	4	Minimum 21.	
1/13/65 0925	33,400	48	10.6	91	137	$\frac{7.3}{8.2}$	$\frac{1.10^c}{1.10^c}$		$\frac{6.2}{0.27}$		$\frac{0}{0.00}$	$\frac{66}{1.08}$		$\frac{2.9}{0.08}$		$\frac{0.0}{0.0}$		20	55	1	140		
2/2 0855	31,300	49	10.8	94	135	$\frac{7.4}{8.0}$	$\frac{1.10^c}{1.10^c}$		$\frac{6.2}{0.27}$		$\frac{0}{0.00}$	$\frac{68}{1.11}$		$\frac{2.7}{0.08}$		$\frac{0.1}{0.1}$		20	55	0	100		
3/1 0945	9,630	56	10.0	95	163	$\frac{7.3}{8.2}$	$\frac{1.36^c}{1.36^c}$		$\frac{7.6}{0.33}$		$\frac{0}{0.00}$	$\frac{80}{1.31}$		$\frac{4.2}{0.12}$		$\frac{0.0}{0.0}$		20	68	2	90		
4/5 1100	8,040	56	9.9	94	143	$\frac{7.5}{7.6}$	$\frac{1.12^c}{1.12^c}$		$\frac{7.2}{0.31}$		$\frac{0}{0.00}$	$\frac{66}{1.08}$		$\frac{8.2}{0.23}$		$\frac{0.0}{0.0}$		22	56	2	30		
5/3 1030	9,160	61	9.4	95	150	$\frac{7.4}{8.4}$	$\frac{15}{0.75}$	$\frac{6.1}{0.50}$	$\frac{6.5}{0.28}$	$\frac{1.2}{0.03}$	$\frac{3}{0.10}$	$\frac{65}{1.07}$	$\frac{11}{0.23}$	$\frac{3.3}{0.09}$	$\frac{1.5}{0.02}$	$\frac{0.0}{0.0}$	$\frac{20}{0.0}$	18	62	4	40	104 ^f ABS 0.0 As 0.00 PO ₄ 0.00	
6/16 1030	7,080	68	9.4	102	140	$\frac{7.4}{8.2}$	$\frac{1.12^c}{1.12^c}$		$\frac{7.2}{0.31}$		$\frac{0}{0.00}$	$\frac{70}{1.15}$		$\frac{3.8}{0.11}$		$\frac{0.0}{0.0}$		22	56	0	30		
7/14 0940	8,410	73	9.1	104	127	$\frac{7.4}{8.1}$	$\frac{0.98^c}{0.98^c}$		$\frac{6.7}{0.29}$		$\frac{0}{0.00}$	$\frac{64}{1.05}$		$\frac{2.7}{0.08}$		$\frac{0.1}{0.1}$		23	49	0	15		
8/11 1150	9,260	66	9.3	99	123	$\frac{7.3}{8.2}$	$\frac{0.96^c}{0.96^c}$		$\frac{5.7}{0.25}$		$\frac{0}{0.00}$	$\frac{65}{1.07}$		$\frac{2.6}{0.07}$		$\frac{0.1}{0.1}$		21	48	0	15		
9/15 1000	8,440	67	9.4	101	125	$\frac{7.4}{8.0}$	$\frac{14}{0.70}$	$\frac{3.4}{0.28}$	$\frac{7.0}{0.30}$	$\frac{1.6}{0.04}$	$\frac{0}{0.00}$	$\frac{65}{1.07}$	$\frac{5.0}{0.10}$	$\frac{2.4}{0.07}$	$\frac{1.4}{0.02}$	$\frac{0.0}{0.0}$	$\frac{20}{0.0}$	23	49	0	10	87 ^f ABS 0.0 As 0.00 PO ₄ 0.06	

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER ABOVE COLLUSA TROUGH (STA. 14b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Caliform ^h MPN/ml	Analyzed by ⁱ				
			parts per million												Other constituents								
			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)				Baron (B)				Silica (SiO ₂)			
10/5/64 1155	6,610	66	9.2	98	144	7.6 8.1	1.14 ^c	7.5 0.33		0 0.00	78 1.28		2.8 0.08		0.0		22	57	0	1			USGS
11/11 1025	18,800	55	9.2	86	136	7.7	0.94 ^c	8.5 0.37		0 0.00	53 0.87		5.3 0.15		0.0		28	47	4	100			
12/9 1010	6,990	52	10.7	97	180	7.6 8.2	1.36 ^c	9.2 0.40		0 0.00	84 1.38		6.2 0.17		0.1		23	68	0	8			
1/13/65 0800	25,600	48	10.4	90	158	7.4 8.2	1.20 ^c	8.4 0.37		0 0.00	72 1.18		4.6 0.13		0.0		24	60	1	200			
2/2 0725	22,200	48	10.4	90	150	7.5 7.9	1.18 ^c	7.7 0.33		0 0.00	72 1.18		4.3 0.12		0.1		22	59	0	130			
3/1 0830	11,200	51	9.2	82	166	7.3 8.2	1.34 ^c	7.3 0.32		0 0.00	80 1.31		3.8 0.11		0.1		19	67	1	30			
4/5 1005	11,100	56	10.0	95	141	7.6 7.7	1.08 ^c	7.5 0.33		0 0.00	65 1.07		4.7 0.13		0.0		23	54	1	30			
5/3 0840	8,720	64	9.3	97	187	7.4 8.5	1.6 0.80	11 0.48	1.2 0.03	5 0.17	74 1.21	13 0.27	6.4 0.18	1.7 0.03	0.1	18 ABS 0.0 As 0.00 PO ₄ 0.00	25	71	2	40			
6/16 0830	6,480	68	8.4	92	192	7.4 8.2	1.40 ^c	13 0.57		0 0.00	85 1.39		7.1 0.20		0.0		29	70	0	30			
7/14 0805	7,970	67	8.9	96	146	7.4 8.2	1.08 ^c	9.2 0.40		0 0.00	70 1.15		3.7 0.10		0.0		27	54	0	36			
8/11 0940	8,820	68	8.9	97	150	7.4 8.2	1.08 ^c	9.0 0.39		0 0.00	72 1.18		4.6 0.13		0.1		27	54	0	15			
9/15 0815	10,700	64	9.0	94	186	7.4 8.2	1.4 0.70	13 0.57	1.2 0.03	0 0.00	88 1.44	11 0.23	6.3 0.18	1.6 0.03	0.0	21 ABS 0.0 As 0.00 PO ₄ 0.09	29	67	0	15			

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT DELTA (STA. 11)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	% Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/5/64 1145	160	61	10.5	110	164	8.2 8.1	1.14 ^c	13.3 0.57		0 0.00	85 1.39		8.8 0.25		0.2			57	0	1	Median 13.6	USGS	
11/10 1210	1330	46	10.3	90	102	7.3 7.3	0.82 ^c	5.0 0.22		0 0.00	50 0.82		3.3 0.09		0.1			41	0	15	Maximum 1300		
12/7 1130	543	45	11.3	97	125	7.8 8.1	1.00 ^c	6.2 0.27		0 0.00	66 1.08		3.0 0.08		0.1			50	0	1	Minimum 0.62		
1/12/65 1105	2340	44	11.6	98	84	7.4 8.0	0.73 ^c	3.8 0.17		0 0.00	46 0.75		1.0 0.03		0.0			36	0	7			
2/2 1145	1480	43	11.9	100	94	7.4 8.1	0.80 ^c	3.6 0.16		0 0.00	50 0.82		1.4 0.04		0.1			40	0	5			
3/2 1130	796	44	11.6	98	109	7.7 8.0	0.91 ^c	4.8 0.21		0 0.00	58 0.95		2.1 0.06		0.0			46	0	3			
4/6 1015	1010	45	11.1	96	98	7.7 7.8	0.85 ^c	4.2 0.18		0 0.00	51 0.84		2.1 0.06		0.1			42	0	4			
5/3 1150	1760	48	11.1	99	82	7.5 7.7	6.4 0.32	2.8 0.12	0.0 0.00	0 0.00	44 0.72	1.0 0.02	1.2 0.03	0.8 0.01	0.0	17.		36	0	5			
6/14 1335	541	57	10.2	102	118	7.9 8.2	0.98 ^c	6.0 0.26		0 0.00	67 1.10		3.6 0.10		0.0			49	0	2			
7/13 0920	278	64	9.9	107	142	8.0 8.2	1.06 ^c	7.6 0.33		0 0.00	73 1.20		5.5 0.16		0.1			53	0	1			
8/10 1050	210	69	9.2	105	152	8.2 8.1	1.12 ^c	10.4 0.44		0 0.00	82 1.34		7.3 0.21		0.2			56	0	1			
9/14 1150	202	61	10.2	107	154	8.1 8.2	8.8 0.44	11.1 0.48	1.1 0.03	0 0.00	79 1.29	2.0 0.04	7.7 0.22	3.7 0.06	0.2	31.	ABS 0.0 AS PO ₄ 0.05	54	0	1			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER			G.H. Q	CG	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER									
								MILLIEQUIVALENT PER LITER										PERCENT REACTANCE VALUE									
								CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH						
B91850.00 10/05/64 5000 1430			2.62	8.7 97	70.0F	8.1 7.5	149	B9 1850.00	--	--	9.0 .39	--	0.0 .00	75 1.23	--	4.8 .14	--	--	.0	--	--	--	--	57 0			
B91850.00 11/05/64 5000 1530			3.54	9.4 92	58.0F	7.2 7.3	183	--	--	11 .48	--	0.0 .00	79 1.30	--	6.8 .19	--	--	.0	--	--	--	--	64 0				
B91850.00 12/09/64 5000 1445			3.17	10.4 92	52.0F	8.2 7.3	174	--	--	10 .44	--	0.0 .00	78 1.28	--	6.2 .17	--	--	.1	--	--	--	--	62 0				
B91650.00 01/05/65 5000 0845			20.62	11.6 100	48.0F	7.8 7.2	87	--	--	4.8 .21	--	0.0 .00	38 .62	--	2.5 .07	--	--	.0	--	--	--	--	33 2				
B91850.00 02/04/65 5000 1530			14.84	11.1 94	47.0F	7.9 7.3	121	--	--	5.4 .23	--	0.0 .00	58 .95	--	3.6 .10	--	--	.0	--	--	--	--	51 4				
B91850.00 03/03/65 5000 1500			6.79	11.0 101	53.0F	8.0 7.3	138	--	--	7.3 .32	--	0.0 .00	62 1.02	--	4.8 .14	--	--	.0	--	--	--	--	52 1				
B91850.00 04/07/65 5000 1600			5.30	10.5 96	53.0F	7.1 7.3	121	--	--	6.6 .29	--	0.0 .00	55 .90	--	4.3 .12	--	--	.0	--	--	--	--	45 0				
B91850.00 05/04/65 5000 1500			8.51	10.2 101	59.0F	7.4 7.3	96	9.0 .45 47	3.5 .29 30	4.5 .20 21	0.8 .02 2	0.0 .00 0.0	44 .72 77	5.0 .10 11	2.2 .06 6	3.0 .05 5	--	.0	18	69 68	37 1						
B91850.00 06/16/65 5000 1345			3.10	8.3 92	69.0F	8.1 7.3	140	--	--	9.2 .40	--	0.0 .00	63 1.03	--	5.1 .14	--	--	.0	--	--	--	--	52 1				
B91850.00 07/14/65 5000 1440			2.38	8.6 97	71.0F	8.2 7.7	139	--	--	8.3 .36	--	0.0 .00	65 1.07	--	5.4 .15	--	--	.0	--	--	--	--	51 0				
B91850.00 08/11/65 5000 1430			2.52	8.2 92	70.0F	8.2 7.5	153	--	--	9.7 .42	--	0.0 .00	70 1.15	--	6.6 .19	--	--	.1	--	--	--	--	54 0				
B91850.00 09/14/65 5000 1415			4.23	8.4 94	70.0F	7.9 7.7	197	15 .75 37	7.9 .65 32	14 .61 30	1.1 .03 1	0.0 .00 0.0	91 1.49 74	13 .27 13	8.3 .23 11	1.9 .03 1	--	.0	19	126 125	70 0						

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER NEAR HAMILTON CITY (STA. 13)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25°C)	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents
10/5/64 1700		65	9.5	100	134	7.5 8.1	1.06 ^c		7.5 0.33		0 0.00	74 1.21		2.6 0.07		0.2		53	0	1	Median 341.	USGS	
11/11 1700		51	10.3	92	142	7.8	1.04 ^c		7.4 0.32		0 0.00	52 0.85		7.2 0.20		0.1		52	9	190	Maximum 24000.		
12/10 0930		53	10.2	93	174	7.4 7.6	— ^c		2.7 0.42		0 0.00	79 1.29		5.8 0.16		0.0		64	0	3	Minimum 23.		
1/13/65 1300		48	10.7	92	130	7.4 8.1	1.04 ^c		6.1 0.27		0 0.00	64 1.05		2.4 0.07		0.0		52	0	200			
2/2 1125		48	10.8	93	124	7.5 7.9	1.02 ^c		5.8 0.25		0 0.00	64 1.05		2.0 0.06		0.0		51	0	100			
3/1 1245		52	10.0	91	157	7.3 8.0	1.34 ^c		7.2 0.31		0 0.00	75 1.23		4.3 0.12		0.1		67	5	30			
4/5 1400		56	9.9	94	151	7.4 7.6	1.22 ^c		7.8 0.34		0 0.00	67 1.10		4.3 0.12		0.0		61	6	15			
5/3 1310		57	9.9	95	145	7.5 8.5	1.4 0.70	5.6 0.46	6.7 0.29	1.2 0.03	3 0.10	61 1.00	11 0.23	3.4 0.10	1.8 0.03	0.0	14 ABS 0.0 As 0.00 PO ₄ 0.00	95 ^f	3	40			
6/16 1330		63	10.1	104	125	7.4 8.3	1.04 ^c		6.2 0.27		2 0.07	60 0.98		3.0 0.08		0.0		52	0	15			
7/14 1400		59	10.1	100	122	7.4 8.1	0.94 ^c		6.1 0.27		0 0.00	62 1.02		2.4 0.07		0.0		47	0	10			
8/11 1445		58	9.9	96	117	7.3 8.2	0.90 ^c		5.4 0.23		0 0.00	61 1.00		2.5 0.07		0.1		45	0	15			
9/15 1345		59	10.1	100	120	7.3 7.7	1.1 0.55	4.7 0.39	5.8 0.25	1.4 0.04	0 0.00	62 1.02	6.0 0.12	2.5 0.07	2.2 0.04	0.0	21 ABS 0.0 As 0.00 PO ₄ 0.18	84 ^f	0	5			

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT KESWICK (STA. 12)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ				
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents			
10/5/64 0835	5,540	56	8.1	79	121	7.2 8.1	1.02 ^c		6.5 0.28			0 0.00	68 1.11	0.0 0.00	1.7 0.05			0.1 0.0			22	51	0	1			USGS
11/9 1610	4,330	55	7.0	67	123	6.8 8.0	0.96 ^c		5.8 0.25			0 0.00	58 0.95	2.0 0.19	2.0 0.06			0.0 0.0			21	48	0	5			
12/7 0830	3,170	52	9.3	86	129	7.0 8.1	1.00 ^c		6.0 0.26			0 0.00	66 1.08	0.15 0.15	0.05 0.05			0.00 0.0			21	50	0	2			
1/12/65 0900	20,000	49	10.6	94	105	7.2 7.8	0.78 ^c		6.6 0.29			0 0.00	50 0.82	7.0 0.15	1.5 0.04			0.0 0.0			27	39	0	80			
2/1 1030	20,000	46	11.1	95	107	7.0 7.9	0.82 ^c		5.3 0.23			0 0.00	47 0.77	11.1 0.23	1.2 0.03			0.0 0.0			22	41	2	35			
3/1- 0915	4,080	45	10.7	90	106	7.0 8.1	0.80 ^c		4.8 0.21			0 0.00	48 0.79	12.1 0.25	0.9 0.03			0.0 0.0			21	40	1	20			
4/5 1020	3,570	46	10.0	86	111	7.0 7.8	0.88 ^c		5.2 0.26			0 0.00	54 0.89	3.0 0.06	1.8 0.05			0.1 0.0			23	44	0	20			
5/4 1815	5,120	51	11.0	100	104	6.8 8.2	0.41	5.2 0.13	4.7 0.20	0.5 0.01	0 0.00	47 0.77	10.1 0.21	1.5 0.04	1.5 0.05	0.2 0.00	ABS 0.0 AS 0.00 PO ₄ 0.05	0.0 0.0	17.1	73 ^f	19	42	3	20			
6/14 1215	8,070	49	9.8	87	108	7.2 8.1	0.86 ^c		5.3 0.23			0 0.00	55.1 0.90	5.0 0.10	2.0 0.06			0.0 0.0			21	43	0	15			
7/12 1845	10,900	51	10.4	95	107	7.1 8.1	0.88 ^c		5.0 0.22			0 0.00	57 0.93	5.0 0.10	2.0 0.06			0.0 0.0			20	44	0	3			
8/10 0815	11,200	51	10.1	92	107	7.2 8.2	0.84 ^c		4.7 0.20			0 0.00	57 0.93	5.0 0.10	1.8 0.05			0.1 0.0			19	42	0	10			
9/14 0900	9,190	51	10.4	95	107	7.2 7.9	0.50	4.1 0.34	5.0 0.22	1.2 0.03	0 0.00	58 0.95	4.0 0.08	1.4 0.04	1.3 0.02	ABS 0.0 AS 0.00 PO ₄ 0.09	0.0 0.0	18.1	79 ^f	20	42	0	5				

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER			
						MINERAL CONSTITUENTS IN										PERCENT REACTANCE VALUE			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH
B01210.00 10/05/64 1130	3.41	7.7 85	69.0F	8.2 7.3	166	B01210.00	--	11 .48	--	0.0 .00	0.0 1.30	--	7.0 .20	--	--	.1	--	--	62 0
B01210.00 11/05/64 1200	5.75	9.3 92	59.0F	8.1 7.3	193	--	--	13 .57	--	0.0 .00	0.0 1.34	--	11 .31	--	--	.0	--	--	67 0
B01210.00 12/09/64 1130	11.12	9.4 86	53.0F	8.0 7.3	164	--	--	11 .48	--	0.0 .00	0.0 1.15	--	7.3 .21	--	--	.1	--	--	58 1
B01210.00 01/05/65 1315	13.88	11.4 98	48.0F	7.9 7.3	141	--	--	9.2 .40	--	0.0 .00	0.0 1.02	--	4.2 .12	--	--	.1	--	--	51 0
B01210.00 02/04/65 1330	11.54	10.7 91	47.0F	8.1 7.3	189	--	--	10 .44	--	0.0 .00	0.0 1.38	--	7.6 .21	--	--	.2	--	--	71 2
B01210.00 03/03/65 1330	5.30	10.7 99	54.0F	8.0 7.3	173	--	--	9.0 .39	--	0.0 .00	0.0 1.18	--	8.3 .23	--	--	.1	--	--	63 4
B01210.00 04/07/65 1130	4.00	9.9 92	54.0F	7.7 7.3	144	--	--	7.8 .34	--	0.0 .00	0.0 1.02	--	5.3 .15	--	--	.0	--	--	54 3
B01210.00 05/04/65 1300	2.94	9.7 99	62.0F	7.6 7.3	124	12 .60 48	4.4 .36 29	5.9 .26 21	1.1 .03 2	0.0 .00 0.0	0.0 .92 76	6.0 .12 10	4.4 .12 10	3.1 .05 4	--	.1	19	85 83	48 2
B01210.00 06/16/65 1030	2.58	8.2 89	67.0F	8.2 7.5	162	--	--	11 .48	--	0.0 .00	0.0 1.13	--	7.1 .20	--	--	.1	--	--	55 0
B01210.00 07/14/65 1130	2.35	8.5 96	71.0F	8.1 8.1	162	--	--	10 .44	--	0.0 .00	0.0 1.16	--	7.4 .21	--	--	.0	--	--	60 2
B01210.00 08/11/65 1230	3.41	7.6 86	71.0F	8.0 7.7	166	--	--	11 .48	--	0.0 .00	0.0 1.23	--	7.9 .22	--	--	.1	--	--	57 0
B01210.00 09/14/65 1200	2.65	7.6 85	70.0F	8.0 7.5	199	18 .90 43	6.3 .52 25	14 .61 29	1.4 .04 2	0.0 .00 0.0	0.0 1.49 74	11 .23 11	9.5 .27 13	1.9 .03 1	--	.0	19	124 126	71 0

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO SLOUGH NEAR KNIGHTS LANDING (STA. 14a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent sodium in ppm	Hardness as CaCO ₃ in ppm		Tur-bidity in ppm	Caliform ^h MPN/ml	Analyzed by	
			equivalents per million																	
			Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-tro-ate (NO ₃)	Fluo-ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/5/64 1110		72	9.3	106	632	$\frac{8.0}{8.2}$	$\frac{4.24^c}{4.24^c}$	$\frac{46.}{2.00}$		$\frac{0}{0.00}$	$\frac{2.51}{4.11}$		$\frac{65.}{1.83}$		32	212	6	15		USGS
11		Inaccessible																		
12/9 0915		52	9.0	81	373	$\frac{7.9}{8.2}$	$\frac{2.80^c}{2.80^c}$	$\frac{25}{2.80}$		$\frac{0}{0.00}$	$\frac{197}{3.23}$		$\frac{18}{0.51}$		28	140	0	40		
1/65		Inaccessible																		
2/		Inaccessible																		
3/		Inaccessible																		
4/5 0915		60	9.2	92	221	$\frac{7.8}{7.8}$	$\frac{1.80^c}{1.80^c}$	$\frac{11}{0.48}$		$\frac{0}{0.00}$	$\frac{114}{1.87}$		$\frac{9.9}{0.28}$		21	90	0	80		
5/		Inaccessible																		
6/16 0755		73	7.0	80	394	$\frac{7.4}{8.6}$	$\frac{2.96^c}{2.96^c}$	$\frac{28}{1.22}$		$\frac{12}{0.40}$	$\frac{166}{2.72}$		$\frac{28}{0.79}$		29	148	0	40		
7/14 0710		76	6.4	76	496	$\frac{7.6}{8.0}$	$\frac{3.52^c}{3.52^c}$	$\frac{38}{1.65}$		$\frac{0}{0.00}$	$\frac{219}{3.59}$		$\frac{43}{1.21}$		32	176	0	36		
8/11 0715		77	7.4	90	494	$\frac{7.4}{8.6}$	$\frac{3.52^c}{3.52^c}$	$\frac{38}{1.65}$		$\frac{10}{0.33}$	$\frac{210}{3.44}$		$\frac{42}{1.18}$		32	176	0	45		
9/15 0715		70	7.1	79	420	$\frac{7.6}{8.2}$	$\frac{29}{1.45}$	$\frac{22}{1.79}$	$\frac{2.1}{0.05}$	$\frac{0}{0.00}$	$\frac{218}{3.57}$	$\frac{9.0}{0.19}$	$\frac{25}{0.71}$	$\frac{5.6}{0.09}$	27	162	0	30		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	DC	TEMP	LAB-PH FLO-PH	EC LAB FLO	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

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TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	CO	TEMP	LAB-PH FLD-PH	EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										MILLIGRAMS PER LITER										
						PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER										
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	H	SI02	TDS SUM	TH NCH							
855820.00 10/08/64 5000 0915	2.77	7.6 84	69.0F	8.2 7.7	764	SAN JOAQUIN RIVER AT MOSSDALE (102)															--	--	.2	--	--	180 47
855820.00 11/11/64 5000 1115	1.55	8.2 79	57.0F	7.8 7.3	725	--	--	80 3.48	--	0.0 .00	162 2.66	--	117 3.30	--	--	.2	--	--	156 48							
855820.00 12/10/64 5000 1115	1.87	8.7 83	56.0F	8.4 7.3	643	--	--	69 3.00	--	4.0 .13	98 1.61	--	100 2.82	--	--	.3	--	136 49								
855820.00 01/07/65 5000 1015	20.30	9.7 86	50.0F	8.0 7.2	209	--	--	18 .78	--	0.0 .00	58 .95	--	21 .59	--	--	.1	--	56 9								
855820.00 02/02/65 5000 1115	17.10	10.3 89	48.0F	7.4 7.1	262	--	--	26 1.13	--	0.0 .00	55 .90	--	32 .90	--	--	.2	--	62 17								
855820.00 03/04/65 5000 1015	5.10	10.5 98	54.0F	7.9 7.3	306	--	--	30 1.31	--	0.0 .00	58 .95	--	43 1.21	--	--	.1	--	71 24								
855820.00 04/08/65 5000 1130	5.83	10.2 96	55.0F	7.9 7.5	326	--	--	34 1.48	--	0.0 .00	67 1.10	--	43 1.21	--	--	.1	--	76 21								
855820.00 05/06/65 5000 0915	5.15	9.7 95	58.0F	8.1 7.3	255	17 .85 35	5.2 .43 18	25 1.09 45	1.6 .04 2	0.0 .00	60 .98 41	21 .44 18	34 .96 40	1.7 .03 1	--	.1	17	153 152	64 15							
855820.00 06/17/65 5000 0945	6.75	8.5 90	65.0F	7.8 7.1	153	--	--	13 .57	--	0.0 .00	40 .66	--	20 .56	--	--	.0	--	39 6								
855820.00 07/15/65 5000 0830	3.65	8.3 99	7.6F	8.3 7.7	576	--	--	60 2.61	--	2.0 .07	103 1.69	--	99 2.79	--	--	.1	--	134 46								
855820.00 08/12/65 5000 1030	2.57	9.1 109	77.0F	8.4 8.1	880	--	--	93 4.05	--	4.0 .13	152 2.49	--	162 4.57	--	--	.3	--	202 71								
855820.00 09/16/65 5000 0930	1.80	10.0	73.0F	7.9 8.1	739	45 2.25 32	14 1.15 17	79 3.44 50	3.8 .10 1	0.0 .00	146 2.39 34	48 1.00 14	123 3.47 50	5.0 .08 1	--	.1	25	444 414	172 53							

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.H. Q	CU	TEMP	LAB-PH FLD-PH FLD	EC	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUF										MILLIGRAMS PER LITER			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS	TH
H95620.00 10/15/64 5000 1506	2.71	5.6 63	71.0F	8.2 7.5	B95620.00 741	--	--	81 3.52	--	0.0 .00	158 2.59	--	119 3.36	--	--	.1	--	--	174 45
H95620.00 11/11/64 5000 0915	1.47	7.8 75	57.0F	7.5 7.3	635	--	--	68 2.96	--	0.0 .00	126 2.07	--	102 2.88	--	--	.1	--	--	145 42
H95620.00 12/10/64 5000 C930	1.79	7.4 69	54.0F	8.3 7.3	609	--	--	61 2.65	--	3.0 .10	99 1.62	--	88 2.48	--	--	.5	--	--	131 45
H95620.00 01/06/65 5000 1130	13.37	9.8 89	52.0F	7.4 7.1	272	--	--	21 .91	--	0.0 .00	48 .79	--	28 .79	--	--	.2	--	--	78 39
H95620.00 02/03/65 5000 0915	12.24	9.4 80	47.0F	8.0 7.1	301	--	--	30 1.31	--	0.0 .00	64 1.05	--	37 1.04	--	--	.2	--	--	72 29
H95620.00 03/01/65 5000 0940	0.76	10.0 92	53.0F	7.7 7.3	278	--	--	28 1.22	--	0.0 .00	53 .87	--	38 1.07	--	--	.1	--	--	65 22
H95620.00 04/08/65 5000 0930	3.83	9.6 92	56.0F	7.3 7.5	377	--	--	40 1.74	--	0.0 .00	76 1.25	--	53 1.49	--	--	.0	--	--	90 28
H95620.00 05/05/65 5000 1315	0.50	10.0 103	63.0F	7.2 7.5	268	19 .95 37	5.0 .41 16	26 1.13 44	1.8 .05 2	0.0 .00	64 1.05 41	24 .50 19	35 .99 39	1.7 .03 1	--	.1	15	160 159	68 16
H95620.00 06/17/65 5000 0800	3.35	7.8 84	67.0F	8.0 7.1	164	--	--	15 .65	--	0.0 .00	44 .72	--	22 .62	--	--	.0	--	--	42 6
H95620.00 07/13/65 5000 1235	-0.41	7.6 92	78.0F	7.9 7.5	370	--	--	38 1.65	--	0.0 .00	76 1.25	--	57 1.61	--	--	.0	--	--	87 25
H95620.00 08/12/65 5000 C830	1.66	6.4 76	76.0F	8.1 7.3	288	--	--	26 1.13	--	0.0 .00	81 1.33	--	37 1.04	--	--	.1	--	--	78 12
H95620.00 09/15/65 5000 1030	1.90	5.5 65	75.0F	7.6 7.5	555	28 1.40 27	13 1.07 20	61 2.65 51	4.1 .10 2	0.0 .00	129 2.12 40	31 .64 12	90 2.54 48	0.1 .00	--	.2	4.7	342 295	124 18

TABLE D-2
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
STONY CREEK BELOW BLACK BUTTE DAM (STA. 13c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25°C)	pH a. b.	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i			
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Baron (B)	Silica (SiO ₂)				Other constituents		
10/6/64 1015	56	70	10.3	116	384	8.1 8.5	3.22 ^e		20. 0.87		6 0.20	180 2.95		23. 0.65			0.3				21	161	4	15	Median 27. Maximum 23. Minimum 2.3	USGS
11/12	No Flow																									
12/10	No Flow																									
1/14/65 1125	1660	47	12.4	106	222	7.9 8.4	1.86 ^e		2.0 0.39		2 0.07	100 1.64		2.2 0.26		1.1 0.02	0.1		PO ₄ 0.10		17	93	8	400		
2/3	No Flow																									
3/1	No Flow																									
4/6 1230	3.8	52	10.7	98	287	8.1 8.0	2.44 ^e		12 0.52		0 0.00	134 2.20		14 0.39			0.1				18	122	12	17		
5/4 1220	541	59	11.6	115	264	8.0 8.0	2.9 1.45		8.6 0.71		0 0.00	124 2.03	16 0.33	12 0.34		1.9 0.03	0.1	11	ABS 0.0 As 0.00 PO ₄ 0.05	151 ^f	19	108	6	85		
6/17 0845	168	62	9.6	99	286	7.7 8.5	2.42 ^e		11 0.48		7 0.23	123 2.02		12 0.34		1.3 0.02	0.1		PO ₄ 0.05		17	121	9	10		
7/15 0745	635	66	9.3	100	293	7.5 8.4	2.52 ^e		11 0.48		3 0.10	135 2.21		12 0.34		2.7 0.04	0.1		PO ₄ 0.20		16	126	10	4		
8/12 1120	746	78	8.7	106	301	7.3 8.5	2.64 ^e		11 0.48		5 0.17	146 2.39		13 0.37		1.5 0.02	0.2		PO ₄ 0.05		15	132	4	35		
9/16 0930	97	68	9.5	105	331	8.1 8.3	3.6 1.80		14 1.12		2 0.07	170 2.79	14 0.29	14 0.39		2.8 0.05	0.2	2.2	ABS 0.0 As 0.00 PO ₄ 0.04	186 ^f	17	146	3	30		

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

STONY CREEK NEAR FRUITO (STA. 13f)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	%Sol			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/1/64 0835	1	61	7.6	79	421	8.5	3.48 ^e	21.0 0.91				7.0 0.23	190 3.11		24.0 0.68			0.3			21	174	7	1	USGS
11/2 0945	10	56	9.6	93	689	8.3	4.88 ^c	40.0 1.74				4.0 0.13	152 2.49		40.0 2.71			0.3			26	244	113	2	
12/1 0900	846	49	9.8	87	140	7.4	1.16 ^c	5.1 0.22				0.0 0.00	58 0.95		4.4 0.12			0.0			16	58	10	200	
1/4/65 1000	4612	42	12.4	100	262	8.3	2.12 ^c	10.0 0.44				1.0 0.03	99 1.62		11.0 0.31			0.0			17	106	23	700	
2/1 0915	2256	42	11.9	96	208	8.1	1.86 ^c	6.1 0.27				0.0 0.00	94 1.54		4.3 0.12			0.1			12	93	16	1200	
3/1 0930	566	43	13.0	106	260	8.1	2.30 ^c	8.4 0.37				0.0 0.00	111 1.82		7.4 0.21			0.0			14	115	24	300	
4/1 0945	545	50	12.3	111	273	7.8	2.38 ^c	9.8 0.43				0.0 0.00	116 1.90		10.0 0.28			0.0			15	119	24	250	
5/3 0830	1700	54	12.7	120	242	7.9	3.2 1.60	7.7 0.33	6.8 0.56	0.5 0.01	0.0 0.00	0.0 0.00	110 1.80	26 0.54	5.4 0.15		0.2 0.00	0.1 0.00	ABS 0.0 As PO ₄ 0.10	148 ^f	13	108	18	400	
6/1 0900	410	60	11.1	113	279	8.5	2.50 ^c	10.0 0.44				8.0 0.27	116 1.90		10.0 0.28		0.0 0.00	0.1 0.00	PO ₄ 0.05		15	125	17	60	
7/1 0800	340	62	9.7	101	329	8.4	2.88 ^c	13.0 0.57				1.0 0.03	151 2.47		11.0 0.31		2.4 0.04	0.1 0.00	PO ₄ 0.15		17	144	19	5	
8/2 0800	400	70	9.9	112	289	8.6	2.52 ^c	11.0 0.48				5.0 0.17	145 2.38		12.0 0.34		1.1 0.02	0.3 0.00	PO ₄ 0.05		16	126	0	30	
9/1 0800	348	70	9.7	100	321	8.5	3.2 1.60	14.0 0.61	15.0 1.22	1.4 0.04	4.0 0.13	164 2.69	8.0 0.17		14.0 0.39		3.4 0.05	0.3 0.00	ABS 0.0 As PO ₄ 0.08	183 ^f	18	141	0	60	

TABLE D-2
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

THOMES CREEK NEAR MOUTH (STA. 95b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

THOMES CREEK NEAR PASKENTIA (STA. 13d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH @ 25	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by	
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
10/6/64 1115	0.8	73	9.0	106	457	7.2 8.3	3.34 ^c		24.4 1.04		2 0.07	105 1.72		23.4 0.65			0.6			167	78	1		USGS
11/12 1410	355	49	11.0	99	212	- 8.0	1.80 ^c		7.4 0.32		0 0.00	92 1.51		7.2 0.20			0.1			90	15	200		
12/10 1135	280	47	11.5	101	142	7.5 8.1	1.26 ^c		4.5 0.20		0 0.00	70 1.15		2.1 0.06			0.2			63	6	20		
1/14/65 1315	900	47	11.3	99	214	8.2 8.0	2.00 ^c		5.2 0.23		0 0.00	102 1.67		1.3 0.04			0.0			100	16	1500		
2/3 1135	920	42	11.6	95	185	7.9 8.1	1.72 ^c		3.8 0.17		0 0.00	87 1.43		0.8 0.02	0.8 0.01		0.1			86	15	600		
3/2 1020	490	46	10.8	93	184	7.1 8.0	1.72 ^c		3.8 0.17		0 0.00	88 1.44		1.8 0.05	0.8 0.01		0.0			86	14	200		
4/6 1335	330	51	10.9	100	200	8.0 8.1	1.90 ^c		4.5 0.20		0 0.00	98 1.61		2.2 0.06			0.0			95	15	80		
5/4 1325	420	60	9.7	100	192	8.0 8.0	2.7 1.35	5.5 0.45	4.1 0.18	0.4 0.01	0 0.00	96 1.57	16 0.33	1.7 0.05	0.7 0.01		0.0	10		90	11	220		
6/17 1015	84	66	8.9	98	294	8.1 8.5	2.88 ^c		5.8 0.25		7 0.23	128 2.10		4.5 0.13	0.0 0.00		0.0			144	28	10		
7/15 0845	32	73	8.3	98	398	8.1 8.5	3.88 ^c		9.2 0.40		3 0.10	171 2.80		7.8 0.22	2.2 0.04		0.0			194	49	1		
8/12 1215	31	83	8.3	108	444	8.1 8.4	4.20 ^c		10 0.44		6 0.20	156 2.56		14 0.39	1.2 0.02		0.2			210	72	2		
9/16 1030	7	67	9.8	109	511	8.1 8.4	5.4 2.69	26 2.15	14 0.61	1.9 0.05	3 0.10	174 2.85	95 1.98	18 0.51	3.4 0.05		0.1	11		242	94	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME		G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
							PERCENT REACTANCE VALUE										TDS				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	SUM	TH	NCH
							YUBA RIVER AT MARYSVILLE (21)														
A06120.00 11/13/64 5000 1000		60.58 51	10.6 98	54.0F	7.8 7.3	132	--	--	4.1 .18	--	0.0 .00	64 1.05	--	1.8 .05	--	--	.0	--	--	57 5	
A06120.00 01/08/65 5000 1000		68.71 18500	12.5 103	45.0F	7.6 7.1	50	--	--	2.3 .10	--	0.0 .00	24 .39	--	0.4 .01	--	--	.0	--	--	20 1	
A06120.00 03/15/65 5000 1415		62.11 860	12.3 111	52.0F	7.8 7.3	77	--	--	2.2 .10	--	0.0 .00	38 .62	--	0.7 .02	--	--	.0	--	--	34 3	
A06120.00 05/07/65 5000 1245		63.00 1890	11.3 112	59.0F	7.1 7.3	57	8.0 .40 70	1.0 .08 14	1.9 .08 14	0.2 .01 2	0.0 .00	27 .44 80	5.0 .10 18	0.5 .01 2	0.2 .00	--	.0	12	43 42	24 2	
A06120.00 07/16/65 5000 0915		61.98 650	8.2 93	72.0F	8.1 7.3	90	--	--	2.9 .13	--	0.0 .00	42 .69	--	0.8 .02	--	--	.0	--	--	39 5	
A06120.00 09/17/65 5000 0930		60.34	9.3 96	63.0F	7.9 7.5	119	16 .80 65	3.4 .28 23	3.3 .14 11	0.6 .02 2	0.0 .00	62 1.02 82	9.0 .19 15	1.1 .03 2	0.1 .00	--	.0	15	78 79	54 3	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.P. Q	DC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN SMARTVILLE (21a)					MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	R	SI02	TDS	TH	
A61100.00 11/19/64 5000 C930		1.70 640	11.0 97	49.0F	7.9 7.3	118	A61100.00	--	3.4 .15	--	0.0 .00	56 .92	--	0.8 .02	--	--	.0	--	--	49 3	
A61100.00 01/02/65 5000 1400		14900	12.7 110	48.0F	7.3 7.1	47	--	--	2.3 .10	--	0.0 .00	23 .38	--	0.2 .01	--	--	.1	--	--	19 0	
A61100.00 03/05/65 5000 1300		2.68 2610	12.2 110	51.0F	7.8 7.3	72	--	--	2.3 .10	--	0.0 .00	37 .61	--	0.6 .02	--	--	.0	--	--	32 2	
A61100.00 05/07/65 5000 1400		2.76 4950	11.9 114	56.0F	7.4 7.5	51	8.0 .40 73	0.7 .06 11	1.8 .08 15	0.5 .01 2	0.0 .00	26 .43 84	3.0 .06 12	0.6 .02 4	0.1 .00	--	.0	12	39 39	23 2	
A61100.00 07/16/65 5000 1030		760	9.1 99	67.0F	8.0 7.5	71	--	--	2.3 .10	--	0.0 .00	36 .59	--	0.8 .02	--	--	.0	--	--	29 0	
A61100.00 09/08/65 5000 1315				75.0F	7.9	109	14 .70 65	3.2 .26 24	2.6 .11 10	0.5 .01 1	0.0 .00	60 .98 88	5.0 .10 9	0.9 .03 3	0.3 .00	--	.0	13	71 69	48 0	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	LAB SAMPLER	G.H. Q	CC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
G83420.00 11/05/64 5000 1015			10.5 103	43.0F	8.2 7.7	G8 3420.00 137	--	--	9.6 .42	--	0.0 .00	69 1.13	--	2.5 .07	--	--	.2	--	--	46 0	
G83420.00 01/19/65 5000 0915			11.4 99	35.0F	8.2 7.5	134	--	--	8.0 .35	--	0.0 .00	64 1.05	--	2.0 .06	--	--	.1	--	--	48 0	
G83420.00 03/09/65 5000 0915			12.1 105	35.0F	8.1 7.7	135	--	--	8.5 .37	--	0.0 .00	68 1.12	--	2.2 .06	--	--	.1	--	--	48 0	
G83420.00 05/11/65 5000 1120			10.4 108	47.0F	7.3 7.5	86	9.4 .47 54	2.1 .17 20	4.8 .21 24	0.7 .02 2	0.0 .00	44 .72 85	4.0 .08 9	1.0 .03 4	1.0 .02 2	--	.0	19	57 64	32 0	
G83420.00 07/20/65 5000 0900			9.3 103	52.0F	7.9 7.5	57	--	--	3.3 .14	--	0.0 .00	30 .49	--	0.8 .02	--	--	.0	--	--	22 0	
G83420.00 09/21/65 5000 0900			10.5 106	45.0F	7.5 7.9	102	12 .60 56	2.2 .18 17	5.9 .26 24	1.2 .03 3	0.0 .00	52 .85 80	7.0 .15 14	1.6 .05 5	0.9 .01 1	--	.0	21	70 77	39 0	

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	CC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
						MINERAL CONSTITUENTS IN					MILLIEQUIVALENT PER LITER					F	R	SI02	TDS SUM	TH NCH
						PERCENT REACTANCE VALUE	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3					
						WOODFORDS (115a)														
G82300.00 11/05/64 5000 0930	1.15	10.4 100	41.0F	7.9 7.3	80	2300.00	--	--	4.3 .19	--	0.0 .00	42 .69	--	0.3 .01	--	--	.0	--	--	29 0
G82300.00 01/19/65 5000 0945	2.10	11.4 100	35.0F	7.9 7.2	65	--	--	--	3.1 .13	--	0.0 .00	34 .56	--	0.3 .01	--	--	.3	--	--	25 0
G82300.00 03/05/65 5000 0900	1.60	11.6 101	35.0F	7.7 7.3	68	--	--	--	3.4 .15	--	0.0 .00	36 .59	--	0.4 .01	--	--	.0	--	--	26 0
G82300.00 05/11/65 5000 1215	3.23	10.3 103	45.0F	7.0 7.3	47	5.6 .28 57	0.7 .06 12	2.7 .12 24	1.1 .03 6	0.0 .00	26 .43 93	0.0 .00 2	0.3 .01 2	1.1 .02 4	--	--	.0	16	40 40	17 0
G82300.00 07/20/65 5000 0815	2.48	8.8 101	54.0F	7.8 7.5	49	--	--	2.3 .10	--	0.0 .00	26 .43	--	0.3 .01	--	--	--	.0	--	--	20 0
G82300.00 09/21/65 5000 0815	2.37	10.2 104	45.0F	7.5 7.5	68	9.6 .48 65	0.5 .04 6	3.2 .14 20	1.5 .04 6	0.0 .00	36 .59 94	1.0 .02 3	0.2 .01 2	0.8 .01 2	--	--	.0	18	50 52	26 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN TAHOE AT LAKE										MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SiO2	TDS	TH	NCH					
G71710.00 11/04/64 5000 1245	4.90	9.0 106	55.0F	8.0 8.3	93	G7	1710.00	6.4 .28	--	0.0 .00	50 .82	--	1.7 .05	--	--	.2	--	--	33 0						
G71710.00 01/18/65 5000 1130	6.94 6220	10.1 100	42.0F	8.0 7.4	93	--	--	6.4 .28	--	0.0 .00	50 .82	--	1.5 .04	--	--	.0	--	--	32 0						
G71710.00 03/08/65 5000 1230	7.02	10.3 108	46.0F	8.2 7.7	93	--	--	6.2 .27	--	0.0 .00	50 .82	--	1.4 .04	--	--	.0	--	--	32 0						
G71710.00 05/10/65 5000 1230	7.64	10.1 110	45.0F	8.1 7.5	93	8.8 .44 47	2.4 .20 21	6.0 .26 28	1.6 .04 4	0.0 .00	49 .80 89	1.0 .02 2	1.8 .05 6	1.8 .03 3	--	.0	12	51 59	32 0						
G71710.00 07/19/65 5000 1020	8.71	8.2 108	64.0F	8.1 8.1	94	--	--	5.9 .26	--	0.0 .00	52 .85	--	1.7 .05	--	--	.0	--	--	34 0						
G71710.00 09/20/65 5000 1145	8.48	8.5 107	60.0F	8.0 8.0	92	12 .60 64	0.6 .05 5	5.7 .25 27	1.6 .04 4	0.0 .00	49 .80 89	3.0 .06 7	1.5 .04 4	0.0 .00	--	.0	12	51 60	32 0						

TABLE D-2

ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)

SUSAN RIVER AT SUSANVILLE (STA. 176)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by		
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
10/7/64 1115		56	8.8	98	193	7.6 7.9	1.80 ^c	7.0 0.30				0 0.00	124 2.03		0.5 0.01		0.0				14	90	0	1	USGS
11/12 1340	28	40	10.7	96	158	7.5 8.0	1.40 ^c	5.9 0.26				0 0.00	97 1.59		0.8 0.02		0.0				16	70	0	2	
12/9 1315	20	42	9.2	85	157	7.7 8.3	1.32 ^c	5.8 0.25				1 0.03	92 1.51		0.7 0.02		0.0				16	66	0	1	
1/21/65 0815	121	38	10.1	88	97	7.4 8.1	0.82 ^c	4.0 0.17				0 0.00	54 0.89		0.8 0.02		0.0				17	41	0	3	
2/4 1315	189	38	11.2	98	96	7.3 7.6	0.81 ^c	4.3 0.19				0 0.00	53 0.87		0.8 0.02		0.0				19	40	0	7	
3/4 1300	117	38	10.4	90	107	7.4 8.2	0.91 ^c	4.0 0.17				0 0.00	62 1.02		0.4 0.01		0.0				16	46	0	4	
4/8 1315	193	40	10.5	94	96	7.4 7.8	0.83 ^c	4.0 0.17				0 0.00	55 0.90		0.5 0.01		0.0				17	42	0	6	
5/5 1600	223	49	9.3	94	86	7.4 7.8	10 0.50	3.6 0.16	2.9 0.24	0.5 0.01	0 0.00	48 0.79	3.0 0.06	0.6 0.02	0.5 0.01	ABS PO ₄	0.0 0.05	0.00		70 ^f	18	37	0	5	
6/17 1345	106	53	9.2	98	82	7.6 8.1	0.70 ^c	3.4 0.15				0 0.00	48 0.79		0.4 0.01		0.1				18	35	0	3	
7/15 1415	34	73	7.7	102	89	7.8 8.2	0.76 ^c	3.7 0.16				0 0.00	52 0.85		0.2 0.01		0.0				17	38	0	3	
8/12 1515	133	68	8.3	105	71	7.9 8.0	0.63 ^c	2.4 0.10				0 0.00	40 0.66		0.3 0.01		0.0				14	32	0	10	
9/16 1415	7.4	62	9.5	113	172	8.1 8.3	18 0.90	6.0 0.26	7.8 0.64	1.7 0.04	1 0.03	107 1.75	1.0 0.02	0.4 0.01	3.9 0.06	ABS PO ₄	0.0 0.04	0.00	113 ^f	14	77	0	2		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME LAB SAMPLER	G.P. Q	DO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										MILLIGRAMS PER LITER				
						PERCENT REACTANCE VALUE										F	B	SIO2	TDS SUM	TH NCH
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						

G71195.00 11/04/64 5050 1345	2.20	9.9 106	50.0F	8.0 7.6	103	G7	1195.00	TRUCKEE RIVER NEAR FARAD (53)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
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TABLE 0-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.P. Q	DO	TEMP	LAB-PH FLO-PH	EC LAB FLO	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER			
						MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										PERCENT REACTANCE VALUE			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH
G71600.00 11/04/64 5000 1315		9.0 105	55.0F	8.0 7.7	100	--	--	5.5 .24	--	0.0 .00	54 .89	--	1.0 .03	--	--	.1	--	--	34 0
G71600.00 01/18/65 5000 1300		10.6 100	42.0F	8.0 7.3	96	--	--	5.4 .23	--	0.0 .00	46 .75	--	2.3 .06	--	--	.1	--	--	35 0
G71600.00 03/08/65 5000 1300		10.5 107	45.0F	8.1 7.3	102	--	--	5.2 .23	--	0.0 .00	48 .79	--	2.2 .06	--	--	.2	--	--	37 0
G71600.00 05/10/65 5000 1200		10.4 109	47.0F	7.2 7.3	71	7.8 .39 53	1.8 .15 21	3.9 .17 23	0.7 .02 3	0.0 .00	34 .56 80	5.0 .10 14	0.8 .02 3	1.0 .02 3	--	.0	19	47 57	27 0
G71600.00 07/19/65 5000 1110		8.4 106	62.0F	8.0 7.9	81	--	--	4.4 .19	--	0.0 .00	40 .66	--	1.4 .04	--	--	.0	--	--	31 0
G71600.00 09/20/65 5000 1230		9.2 109	56.0F	7.8 7.9	102	13 .65 61	1.3 .11 10	5.9 .26 24	2.0 .05 5	0.0 .00	54 .89 86	5.0 .10 10	1.6 .05 5	0.1 .00	--	.0	16	59 71	38 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME			G.H. C	CO	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PFR LITER										MILLIGRAMS PER LITER				
								PERCENT REACTANCE VALUE														
								CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	H	SI02	TDS	TH	
G93200.00 11/05/64 5000 1315			0.46	10.2 114	50.0F	8.3 8.1	252	Q9 3200.00	WALKER RIVER, EAST,	NEAR	BRIDGEPORT (116a)	--	1.6 .05	--	.1	--	--	93 0				
G93200.00 01/19/65 5000 1230			0.17	9.9 94	38.0F	8.4 7.5	268	--	23 1.00	2.0 .07	134 2.20	--	3.1 .09	--	.2	--	92 0					
G93200.00 03/09/65 5000 1215			0.82	9.3 92	41.0F	8.0 7.3	279	--	27 1.17	0.0 .00	130 2.13	--	5.4 .15	--	.2	--	80 0					
G93200.00 05/11/65 5000 0915			1.77	9.8 107	48.0F	7.8 8.1	212	24 1.20 56	2.9 .24 11	15 .65 30	2.8 .07 3	0.0 .00	108 1.77 79	17 .35 16	.1	17 134 136	72 0					
G93200.00 07/20/65 5000 1130			2.33	7.2 96	64.0F	7.8 >8.4	139	--	7.8 .34	0.0 .00	70 1.15	--	1.4 .04	--	.0	--	53 0					
G93200.00 09/21/65 5000 1045			1.47	8.6 103	55.0F	7.5 8.4	164	22 1.10 63	1.7 .14 8	9.8 .43 25	3.1 .08 5	0.0 .00	88 1.44 86	9.0 .19 11	.0	84 100	62 0					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER DATE TIME	G.H. O	CC	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										MILLIGRAMS PER LITER					
						PERCENT REACTANCE VALUE										TDS SUM					
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	S102	TH NCH			
G92400.00 11/05/64 5000 1200	0.92	10.4 112	46.0F	8.1 7.8	G9 2400.00 145	--	--	13 .57	--	0.0 .00	74 1.21	--	2.1 .06	--	--	.2	--	--	43 0		
G92400.00 01/19/65 5000 1145	1.85	11.4 102	34.0F	8.0 7.2	86	--	--	4.7 .20	--	0.0 .00	44 .72	--	0.5 .01	--	--	.0	--	--	33 0		
G92400.00 03/09/65 5000 1115	1.79	11.2 106	37.0F	8.1 7.3	104	--	--	5.8 .25	--	0.0 .00	56 .92	--	0.8 .02	--	--	.0	--	--	41 0		
G92400.00 05/11/65 5000 1000	2.57	10.5 108	43.0F	7.4 7.3	68	8.4 .42 61	1.2 .10 14	3.5 .15 22	0.7 .02 3	0.0 .00	36 .59 87	3.0 .06 9	0.4 .01 1	1.4 .02 3	--	.0	10	40 46	26 0		
G92400.00 07/20/65 5000 1030	3.33	9.5 106	49.0F	7.6 7.5	35	--	--	1.7 .07	--	0.0 .00	19 .31	--	0.3 .01	--	--	.0	--	--	14 0		
G92400.00 09/21/65 5000 1145	1.73	10.0 112	49.0F	7.6 7.5	87	13 .65 73	0.1 .01 1	4.9 .21 24	0.9 .02 2	0.0 .00	44 .72 85	5.0 .10 12	0.6 .02 2	0.8 .01 1	--	.0	12	50 59	33 0		

TABLE D-3
TRACE METAL ANALYSES OF SURFACE WATER
1964-65

Station	Station Number	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
AMERICAN RIVER AT NIMBUS DAM	22a	5-5 9-15	36 16	< 0.57 < 1.3	< 0.29 < 0.67	< 1.4 < 3.3	< 1.4 < 3.3	CENTRAL VALLEY REGION (NO. 5)	< 1.4 < 3.3	106 13	< 5.7 < 13	< 0.29 < 0.67	< 1.4 < 3.3	< 0.29 < 0.67	0.91 1.0	< 1.4 10	< 0.57 1.3	0.60 1.5	< 5.7 < 13
AMERICAN RIVER AT SACRAMENTO	22	5-5 9-15	37 21	< 0.57 < 1.3	< 0.29 < 0.67	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	91 17	< 5.7 < 13	< 0.29 < 0.67	< 1.4 < 3.3	< 0.29 < 0.67	1.3 1.7	< 1.4 11	< 0.57 < 1.3	0.97 1.7	< 5.7 < 13
BEAR RIVER NEAR WHEATIAND	78	5-7 9-17	180 < 1.4	< 0.57 < 0.57	< 0.29 2.7	< 1.4 < 1.4	< 1.4 31	< 1.4 < 1.4	< 1.4 < 1.4	151	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	2.5 2.2	< 1.4 < 1.4	8.9 < 0.57	1.1 < 0.29	< 5.7 < 5.7
CACHE CREEK NEAR CAPAY	80	5-3 9-13	9.1 9.1	< 0.57 < 0.57	< 0.29 < 0.29	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	31 9.7	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	1.5 2.1	< 1.4 < 1.4	< 0.57 < 0.57	1.9 2.1	< 5.7 < 5.7
CALAVERAS RIVER NEAR STOCKTON	16b	MAY 9-2	DRY 19	NO SAMPLE < 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	16	< 13	< 0.67	< 3.3	< 0.67	2.4	10	1.3	5.7	< 13
COSUMNES RIVER AT McCONNELL	94a	5-5	31	< 0.57	< 0.29	< 1.4	< 1.4	2.1	< 1.4	160	< 5.7	< 0.29	< 1.4	< 0.29	0.68	< 1.4	0.57	1.2	< 5.7
COSUMNES RIVER AT MICHIGAN BAR	94	9-2	< 1.4	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	9.4	< 5.7	< 0.29	< 1.4	< 0.29	< 0.29	< 1.4	< 0.57	2.5	< 5.7
DELTA CROSS CHANNEL AT WALNUT GROVE	98	5-4 9-14	70 25	< 0.57 < 0.57	< 0.29 < 0.29	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	77 41	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	1.4 0.8	< 1.4 < 1.4	3.1 < 0.57	2.9 6.0	< 5.7 < 5.7
FEATHER RIVER AT NICOLAUS	20	5-7 9-17	49 < 1.4	< 0.57 < 0.57	< 0.29 < 0.29	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	124 5.7	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	1.0 2.2	< 1.4 < 1.4	< 0.57 < 0.57	1.4 < 0.29	< 5.7 < 5.7
FEATHER RIVER NEAR OROVILLE	19	5-7 9-17	83 < 1.4	< 0.57 < 0.57	< 0.29 < 0.29	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	206 20	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	0.54 2.2	< 1.4 < 1.4	3.4 < 0.57	1.5 < 0.29	< 5.7 < 5.7
MOKEJUMNE RIVER AT WOODBRIDGE	23	5-5 9-15	100 41	< 0.57 < 1.3	< 0.29 < 0.67	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	83 167	< 5.7 < 13	< 0.29 < 0.67	< 1.4 < 3.3	< 0.29 < 0.67	0.80 0.70	< 1.4 15	4.0 2.3	0.89 1.7	< 5.7 < 13
OLD RIVER AT MANDEVILLE ISLAND	112	5-17 9-7	189 68	< 0.57 < 0.57	< 0.29 < 0.29	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	< 1.4 < 1.4	343 > 50	< 5.7 < 5.7	< 0.29 < 0.29	< 1.4 < 1.4	< 0.29 < 0.29	0.86 1.1	< 1.4 < 1.4	14 2.7	4.6 5.7	< 5.7 < 5.7
PIT RIVER NEAR CANBY	17a	5-5 9-16	667 4.3	< 1.3 < 0.57	< 0.67 < 0.29	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	320 17	< 13 < 5.7	< 0.67 < 0.29	< 3.3 < 1.4	< 0.67 < 0.29	0.6 0.6	< 3.3 < 1.4	0.8 0.8	3.7 3.7	< 5.7 < 5.7
SACRAMENTO RIVER AT BEND	12c	5-6 9-13	127 111	< 1.3 < 0.57	< 0.67 < 0.29	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	260 > 50	< 13 < 5.7	< 0.67 < 0.29	< 3.3 < 1.4	< 0.67 < 0.29	17 2.4	< 3.3 < 1.4	4.3 5.7	2.1 3.1	< 13 < 5.7
SACRAMENTO RIVER AT COLUSA	13b	5-3 9-15	93 77	< 1.3 < 0.57	< 0.67 < 0.29	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	170 > 50	< 13 < 5.7	< 0.67 < 0.29	< 3.3 < 1.4	< 0.67 < 0.29	3.2 2.1	< 3.3 < 1.4	2.7 2.6	2.9 2.4	< 13 < 5.7
SACRAMENTO RIVER ABOVE COLUSA TROUGH	14b	5-3 9-15	73 36	< 1.3 < 0.57	< 0.67 < 0.29	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	170 > 50	< 13 < 5.7	< 0.67 < 0.29	< 3.3 < 1.4	< 0.67 < 0.29	1.7 1.2	< 3.3 < 1.4	4.0 1.3	4.5 2.9	< 13 < 5.7
SACRAMENTO RIVER NEAR HAMILTON CITY	13	5-3 9-15	83 119	< 1.3 < 0.57	< 0.67 < 0.29	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	< 3.3 < 1.4	160 > 50	< 13 < 5.7	< 0.67 < 0.29	< 3.3 < 1.4	< 0.67 < 0.29	2.0 2.9	< 3.3 < 1.4	2.0 4.3	2.2 2.8	< 13 < 5.7
SACRAMENTO RIVER AT FREEPORT	15b	5-4 9-14	56 25	< 0.57 < 1.3	< 0.29 < 0.67	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	< 1.4 < 3.3	120 47	< 5.7 < 13	< 0.29 < 0.67	< 1.4 < 3.3	< 0.29 < 0.67	1.4 2.1	< 1.4 13	1.4 1.9	2.2 9.3	< 5.7 < 13

TRACE METAL ANALYSES OF SURFACE WATER

1964 - 65

Station	Station Number	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Blismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Mango- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
SACRAMENTO RIVER AT KESWICK SACRAMENTO RIVER AT RIO VISTA SAN JOAQUIN RIVER AT ANTIOCH STONY CREEK BELOW BLACK BUTTE DAM YUBA RIVER AT MARYSVILLE	12	5-4 9-14	227 274	<1.3 <0.57	<0.67 <0.29	<3.3 <1.4	<3.3 0.8	<3.3 <1.4	<3.3 <1.4	313 > 50	< 13 <5.7	<0.67 <0.29	<3.3 4.0	<0.67 <0.29	3.3 3.7	< 1.3 < 1.4	8.7 6.6	1.8 2.7	< 13 <5.7
	16	5-4 9-14	103 59	<0.57 <1.3	<0.29 <0.67	<1.4 <3.3	<1.4 <3.3	<1.4 <3.3	<1.4 <3.3	194 56	<5.7 < 13	<0.29 <0.67	<1.4 <3.3	<0.29 <0.67	1.3 2.7	2.0 11	3.7 2.5	4.0 11	<5.7 < 13
	28	5-4	171	<0.57	<0.29	<1.4	<1.4	<1.4	<1.4	143	<5.7	<0.29	<1.4	<0.29	1.9	< 1.4	5.1	3.7	<5.7
	13c	5-3	93	<1.3	<0.67	<3.3	<3.3	<3.3	<3.3	170	< 13	<0.67	<3.3	<0.67	3.2	< 3.3	2.7	2.9	< 1.3
	21	5-7 9-17	34 <1.4	<0.57 <0.57	>0.29 <0.29	<1.4 <1.4	3.1 <1.4	<1.4 <1.4	<1.4 <1.4	97 7.1	<5.7 <5.7	<0.29 <0.29	<1.4 <1.4	<0.29 <0.29	1.0 <0.29	< 1.4 < 1.4	3.7 <0.57	0.74 <0.29	<5.7 <5.7
LAHONTAN REGION (NO. 6)																			
LAKE TAHOE AT TAHOE TRUCKEE RIVER NEAR FARAD	38	5-10 9-20	11 <1.4	<0.57 <0.57	<0.29 <0.29	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	83 17	<5.7 <5.7	<0.29 <0.29	<1.4 <1.4	2.7 <0.29	0.69 <0.29	< 1.4 < 1.4	<0.57 <0.57	1.0 <0.29	<5.7 <5.7
	53	5-10 9-20	19 34	<0.57 <0.57	<0.29 <0.29	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	4.3 <1.4	31 >2860	<5.7 <5.7	<0.29 <0.29	<1.4 <1.4	<0.29 <0.29	0.40 0.6	< 1.4 1.6	<0.57 1.5	1.2 1.2	<5.7 <5.7

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
American River, Middle Fork near Auburn (22b) A 7 3100.00	11/12			60			
	1/14			15			
	3/15			2			
	5/14			20	0.0	0.00	0.05
	7/13			1			
	9/2			1	0.0	0.00	0.01
American River at Nimbus Dam(22a) A 7 1110.00	10/6	23	62	1			
	11/12	620	23	2			
	12/15	230	13	4			
	1/6	23	23	100			
	2/1	2.3	2.3	35			
	3/1	0.62	2.3	15			
	4/13	2.3	23	11			
	5/5	0.62	0.23	15	0.0	0.00	0.05
	6/14	6.2	6.2	2			
	7/13	230	62	1			
	8/9	62	2.3	1			
	9/15	62	6.2	1	0.0	0.00	0.00
American River at Sacramento(22) A 0 7140.00	10/6	62	23	1			
	11/12	62	23	5			
	12/7	6.2	23	2			
	1/6	23	62	120			
	2/1	2.3	23	35			
	3/3	0.62	1.3	15			
	4/5	5.0	6.2	6			
	5/5	6.2	2.3	6	0.0	0.00	0.05
	6/16	50	230	5			
	7/13	13	62	1			
	8/9	23	9.5	2			
	9/15	23	23	2	0.0	0.00	0.08
American River, South Fork near Lotus (22c) A 7 4150.00	11/12			100			
	1/12			15			
	3/15			2			
	5/14			6	0.0	0.00	0.00
	7/1			1			
	9/2			4	0.0	0.00	0.00

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Bear River near Wheatland (78) A 0 6550.00	10/9	230	62	2			
	11/13	23	62	8			
	12/11	5.0	13	5			
	1/8	230	62	300			
	2/5	2.3	6.2	100			
	3/5	2.3	6.2	60			
	4/13	23	23	35			
	5/7	230	23	30	0.0	0.00	0.00
	6/18	6.2	2.3	6			
	7/16	62	2.3	2			
	8/13	230	230	3			
	9/17	13	23	1	0.0	0.00	0.01
Cache Creek near Capay (80) A 8 1120.00	10/7			1			
	11/10			35			
	12/8			40			
	1/4			650			
	2/2			40			
	3/2			2			
	4/6			7			
	5/3			2	0.0	0.00	0.10
	6/15			5			
	7/14			16			
	8/10			>20			
	9/13			20	0.0	0.00	0.17
Calaveras River below New Hogan Dam (16c) B 2 5300.00	10/6	Dry					
	11/2			1			
	12/1			2			
	1/5	Dry					
	2/2	23	13	15			
	3/1	21	23	9			
	4/5	2.3	2.1	10			
	5/4	23	2.3	9	0.0	0.00	0.10
	6/4	5.0	2.3	5			
	7/12			1			
	8/9			3			
	9/13			10	0.0	0.00	0.07

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Calaveras River above New Hogan Dam (16d) B 2 5898.50	10/6	Dry		.			
	11/2			1			
	12/1			2			
	1/5			10			
	2/1			2			
	3/1	62	6.0	1			
	4/5	230	130	5			
	5/4	62	230	1	0.0	0.00	0.10
	6/14	6.2	50	1			
	7/12			1			
	8/9			1			
	9/13			1	0.0	0.00	0.03
Calaveras River at Jenny Lind (16a) B 0 2590.00	10/13	Dry					
	11/16			3			
	12/1			1			
	1/11			25			
	2/8			10			
	3/1			8			
	4/1			10			
	5/18			5	0.0	0.00	0.00
	6/10			2			
	7/1			1			
	8/2			<1			
	9/2			1	0.0	0.00	0.00
Calaveras River at Stockton(16b) B 0 2520.00	10/13	Dry					
	11/11	Dry					
	12/1	Dry					
	1/6			260			
	2/17			7			
	3/11			5			
	4/1			25			
	5/17	Dry					
	6/10			3			
	7/2			10			
	8/2			16			
	9/2			20	0.0	0.00	0.01
Cosumnes River at McConnell(94a) B 0 1125.00	11/12	230	2400	120			
	1/6	500	230	200			
	3/4	6.2	2.3	9			
	5/5	62	23	20	0.0	0.00	0.00
	7/13	2.3	5.0	2			
	9/15	Dry					

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Cosumnes River at Michigan Bar (94) B 1 1150.00	11/12			20			
	1/12			10			
	3/15			4			
	5/18			2	0.0	0.00	0.00
	7/1			2			
	9/2			1	0.0	0.00	0.00
Delta Cross Channel near Walnut Grove (98) B 9 1700.00	10/5	230	230	7			
	11/9	23	62	1			
	12/9	2400	1300	9			
	1/5	230	620	220			
	2/4	230	620	150			
	3/3	2400	2400	20			
	4/7	230	620	25			
	5/4	62	230	20	0.0	0.00	0.05
	6/16	230	62	20			
	7/14	6.2	6.2	20			
	8/11	23	13	>10			
	9/14	62	23	5	0.0	0.00	0.24
Feather River, Middle Fork near Merrimac (19b) A 5 5100.00	10/14			1			
	11/19			1			
	12/3			1			0.05
	1/26			20			*0.15
	2/5			7			*0.10
	3/12			4			*0.10
	4/1			5			0.10
	5/13			8	0.0	0.00	*0.05
	6/11			6			*0.10
	7/8			10			0.10
	8/6			<1			
	9/3			1	0.0	0.00	0.01
Feather River at Nicolaus (20) A 0 5103.00	10/9	6.2	23	14			
	11/13	230	23	10			
	12/11	23	6.2	10			
	1/8	230	62	200			
	2/5	230	230	30			
	3/5	230	230	20			
	4/9	230	50	35			
	5/7	620	23	30	0.0	0.00	0.00
	6/18	23	62	25			
	7/16	50	62	18			
	8/13	23	230	7			
	9/17	6.2	6.2	15	0.0	0.00	0.01

*Total phosphate

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN / ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Feather River, North Fork at Big Bar (19a) A 5 3140.00	10/9			1			
	11/20			2			
	12/4			1			0.05
	1/15			15			*0.20
	2/5			7			*0.10
	3/10			3			*0.00
	4/9			20			0.05
	5/12			6	0.0	0.00	*0.05
	6/18			1			*0.05
	7/21			1			
	8/13			2			
	9/8			1	0.0	0.00	0.01
Feather River near Oroville(19) A 5 1140.00	10/9			1			
	11/13	23	2.3	7			
	12/11	130	23	25			0.05
	1/8	62	23	60			*0.10
	2/5	23	62	15			*0.05
	3/5	6.2	23	8			*0.00
	4/9	21	230	30			0.05
	5/7	6.2	6.2	20	0.0	0.00	*0.05
	6/18	13	23	8			*0.05
	7/16	6.2	6.2	1			
	8/13	13	13	4			
	9/17	6.2	6.2	3	0.0	0.00	0.00
Feather River below Shanghai Bend (20a) A 0 5120.00	10/9			2			
	11/20			3			
	12/11			6			
	1/8			120			
	2/5			35			
	3/15			15			
	4/9			25			
	5/14			20	0.0	0.00	0.00
	6/18			35			
	7/16			3			
	8/13			4			
	9/17			1	0.0	0.00	0.04

*Total phosphate

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Feather River, South Fork below Ponderosa Dam (19c) A 5 6080.00	10/14			1			
	11/19			3			
	12/3			1			0.05
	1/15			15			0.10
	2/9			10			*0.00
	3/12			15			*0.00
	4/2			10			0.05
	5/13			1	0.0	0.00	*0.05
	6/11			5			*0.10
	7/8			1			0.15
	8/6			<1			
	9/3			1	0.0	0.00	0.00
Feather River, West Branch near Yankee Hill (19d) A 5 2100.00	11/20			1			
	12/4			1			0.05
	1/15			5			0.15
	2/5			8			*0.05
	3/10			2			*0.05
	4/9			20			0.05
	5/13			1	0.0	0.00	*0.00
	6/18			2			*0.10
	7/21			1			
	8/13			30			
	9/8			1	0.0	0.00	0.00
Grant Line Canal at Tracy Road Bridge (103a) B 9 5300.00	10/8	2400	2400	9			
	11/11	23	62	15			
	12/10	62	230	4			
	1/7	23	62	40			
	2/3	230	62	30			
	3/4	23	6.2	10			
	4/8	620	62	25			
	5/6	62	62	30	0.0	0.00	0.10
	6/17	130	230	25			
	7/15	13	62	22			
	8/12	6.2	13	20			
	9/16	23	5.0	30	0.0	0.01	0.48
Indian Creek near Crescent Mills ** (17d) A 5 4320.00	11/6			4			
	1/27	240	240	30			
	3/10	7.0	6.0	15			
	5/12	10	5.0	15	0.0	0.00	0.05
	7/21	100	100	3			
	9/22	32	34	45	0.0	0.00	0.22

* Total phosphate

**Coliform by Millipore Filter method 107

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml	Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Indian Slough near Brentwood (107) B 9 5279.80	10/13		30			
	11/18		7			
	12/1		1			
	1/7		40			
	2/8		30			
	3/11		20			
	4/12		30			
	5/17		55	0.0	0.01	0.15
	6/10		80			
	7/1		52			
	8/16		35			
	9/1		35	0.0	0.00	0.05
Italian Slough near Mouth (106) B 9 5270.20	10/8					
	11/5		30			
	12/3		20			
	1/8		20			
	2/3		30			
	3/3		20			
	4/8		25			
	5/6		40	0.0	0.00	0.10
	6/17		40			
	7/15		37			
	8/13		37			
	9/17		25	0.0	0.01	0.22
Little Potato Slough at Terminous (99) B 9 4120.10	11/9		15			
	1/5		40			
	3/11		50			
	5/17		30	0.0	0.00	0.00
	7/2		17			
	9/7		20	0.0	0.00	0.10
Mokelumne River near Lancha Plana Mokelumne River below Camanche Dam (23a) B 2 1170.00	11/16		9			
	1/11		40			
	3/1		10			
	5/18		3	0.0	0.00	0.00
	7/1		1			
	9/2		1	0.0	0.00	0.01

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Mokelumne River at Woodbridge (23) B 9 4300.00	11/12	230	23	1			
	1/6	23	62	60			
	3/1	2.3	0.23	10			
	5/5	2.3	5.0	15	0.0	0.00	0.00
	7/13	6.2	2.3	4			
	9/15	23	62	4	0.0	0.00	0.02
Old River at Clifton Ct. Ferry (104) B 9 5340.00	10/8	13	50	15			
	11/11	620	130	15			
	12/10	50	23	15			
	1/7	500	620	40			
	2/3	62	62	30			
	3/4	23	6.2	10			
	4/8	23	230	25			
	5/6	23	23	25	0.0	0.00	0.10
	6/17	95	62	25			
	7/15	23	2.3	42			
	8/12	6.2	62	35			
	9/16	1.4	23	25	0.0	0.01	0.19
Old River at Mandeville Island (112) B 9 5220.00	10/13			15			
	11/16			10			
	12/1			15			
	1/11			30			
	2/8			40			
	3/11			30			
	4/1			20			
	5/17			30	0.0	0.00	0.10
	6/10			50			
	7/2			35			
	8/2			25			
	9/7			15	0.0	0.00	0.11
Old River at Orwood Bridge (108) B 9 5320.20	10/13			20			
	11/18			10			
	12/1			1			
	1/11			50			
	2/8			20			
	3/11			20			
	4/12			25			
	5/17			40	0.0	0.04	0.20
	6/10			60			
	7/2			33			
	8/2			broken	in transit		
	9/1			25	0.0	0.00	0.10

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Old River near Tracy (103) B 9 5380.00	10/8	290	28	20			
	11/11	24000	24000	20			
	12/10	230	62	10			
	1/7	230	2400	30			
	2/3	23	23	10			
	3/4	24000	62	25			
	4/8	620	620	15			
	5/6	23	23	15	0.0	0.00	0.10
	6/17	620	62	30			
	7/15	62	130	35			
	8/12	2400	20	<30			
	9/16	62	6.2	30	0.0	0.01	0.50
Rock Slough near Knightsen (109) B 9 5220.00	10/8	62	62	20			
	11/11	230	62	15			
	12/10	2.3	23	20			
	1/7	23	620	50			
	2/3	6.2	13	20			
	3/4	6.2	2.3	30			
	4/7	62	2.3	20			
	5/6	23	50	40	0.0	0.00	0.05
	6/17	23	130	50			
	7/15	23	62	36			
	8/12	23	62	35			
	9/16	6.2	62	25	0.0	0.01	0.20
Sacramento River at Freeport B 9 1849.90 (15b)		<u>L.B.</u>	<u>R.B.</u>				
	10/5	62	23	10			
		62	23				
	11/9	2400	2400	1			
		620	620				
	12/9	7000	620	3			
		24000	620				
	1/5	620	230	180			
		2400	620				
	2/4	2400	620	60			
		620	230				
	3/3	620	620	20			
		2400	230				
	4/7	7000	230	30			
		620	230				
	5/4	62	50	30	0.0	0.00	0.15
		50	6.2				
	6/16	62	62	30			
		620	230				
	7/14	62	6.2	10			
		6.2	23				

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
(continued) Sacramento River at Freeport (15b) B 9 1849.90		<u>L.B.</u>	<u>R.B.</u>				
	8/11	23	2.3	<20			
		23	2.3				
	9/14	230 62	13 23	20	0.0	0.00	0.30
Sacramento River at Rio Vista (16) B 9 1210.00		<u>L.B.</u>	<u>R.B.</u>				
	10/5	62	62	15			
		62	62				
	11/9	6.2	6.2	15			
		6.2	23				
	12/9	62	62	20			
		62	62				
	1/5	230	230	300			
		620	230				
	2/4	230	620	50			
		230	500				
	3/3	620	620	30			
		2400	620				
	4/7	230	230	25			
		230	2400				
	5/4	2400	620	80	0.0	0.00	0.20
		230	230				
	6/16	23	500	40			
		62	130				
	7/14	1.3	23	15			
		6.2	2.3				
	8/11	2.3	62	30			
		2.3	62				
	9/14	2.3	6.2	20	0.0	0.00	0.27
		6.2	13				
San Joaquin River at Antioch (28) B 9 5020.00	10/5	2400	230	35			
	11/9	62	23	25			
	12/9	6.2	23	20			
	1/5	50	62	130			
	2/4	620	23	57			
	3/4	62	23	30			
	4/13	23	62	30			
	5/4	13	23	70	0.0	0.00	0.20
	6/6	23	21	40			
	7/14	0.23	2.3	27			
	8/11	62	2.1	35			
	9/14	620	230	30	0.0	0.00	0.16

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
San Joaquin River at Garwood Bridge (101) B 9 5710.00	10/8	130	2400	2			
	11/11	2400	620	20			
	12/10	230	230	9			
	1/7	62	230	30			
	2/3	62	62	20			
	3/4	23	13	10			
	4/8	620	230	11			
	5/6	62	23	30	0.0	0.00	0.20
	6/17	500	1300	20			
	7/15	620	290	20			
	8/12	620	620	20			
	9/16	2400	2400	25	0.0	0.01	1.42
San Joaquin River at Mossdale Bridge (102) B 9 5820.00	10/8	230	230	10			
	11/11	130	230	20			
	12/10	620	2400	9			
	1/7	62	62	40			
	2/3	50	62	30			
	3/4	62	23	10			
	4/8	2400	7000	49			
	5/6	130	2400	20	0.0	0.00	0.15
	6/17	230	230	25			
	7/15	62	62	13			
	8/12	6.2	0.62	30			
	9/16	6.2	6.2	10	0.0	0.01	0.46
Stockton Ship Channel on Rindge Island (100) B 9 5619.80	10/15			20			
	11/11	23	130	7			
	12/10	23	13	7			
	1/6	230	620	40			
	2/3	23	23	20			
	3/1	6.2	13	15			
	4/8	23	62	25			
	5/5	23	2.3	30	0.0	0.00	0.40
	6/17	620	23	30			
	7/13	6.2	13	30			
	8/12	23	23	25			
	9/15	5.0	23	30	0.1	0.00	0.15
Yuba River at Marysville (21) A 0 6120.00	11/13	23	23	5			
	1/8	21	23	100			
	3/5	2.3	0.62	7			
	5/7	6.2	0.62	25	0.0	0.00	0.00
	7/16	62	23	3			
	9/17	6.2	6.2	1	0.0	0.00	0.00

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Yuba River near Smartville (21a) A 6 1100.00	11/19			3			
	1/8			140			
	3/5			5			
	5/7			3	0.0	0.00	0.00
	7/16			1			
	9/8			1	0.0	0.00	0.01

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Carson River, East Fork near Markleeville (115) G 8 3420.20	11/5	0.091	0.43	1			
	1/19	0.23	0.091	7			
	3/9	0.091	0.23	3			
	5/11	0	0	2	0.0	0.00	0.05
	7/20	1.5	0.93	4			
	9/21	2.4	1.5	1	0.0	0.01	0.05
Carson River, West Fork at Woodfords (115a) G 8 2300.00	11/5	0.93	0.23	0			
	1/19	15	0.43	0			
	3/9	0.23	0.43	0			
	5/11	0.091	0.061	0	0.0	0.00	0.00
	7/20	1.5	11	0			
	9/21	0.93	0.43	0	0.0	0.00	0.00
Lake Tahoe at Tahoe (38) G 7 1710.00	11/4	0.93	0.43	1			
	1/18	0.15	0.091	1			
	3/8	0.036	<0.036	2			
	5/10	0.43	0.23	5	0.0	0.00	0.00
	7/19	0.23	0.43	0			
	9/20	0.23	0.23	0	0.0	0.00	0.00
Truckee River near Farad (53) G 7 1195.00	10/6	2.3	2.3	2			*0.13
	11/4	2.4	0.93	3			*0.03
	12/7	2.3	6.2	2			*0.04
	1/18	0.23	0.23	14			*0.09
	2/11	1.3	2.3	20			*0.06
	3/8	0.95	0.091	4			*0.02
	4/5	0.62	0.62	20			*0.03
	5/10	0.23	0.036	5.2	0.0		*0.05
	6/14	6.2	23	10			*0.06
	7/19	2.4	2.9	105			*0.71
	8/9	0.50	0.62	5			*0.04
	9/20	11	2.4	4			*0.06
Truckee River near Truckee (52) G 7 1600.50	11/4	0.43	0.43	1			
	1/18			1			
	3/8			1			
	5/10			4	0.0	0.00	0.00
	7/19			1			
	9/20			1	0.0	0.00	0.01

*Total phosphate

TABLE D-4
MISCELLANEOUS CONSTITUENTS
SURFACE WATER
1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO ₄ in ppm
Walker River, East near Bridgeport (116a) G 9 3200.00	11/5	0.091	0.091	1			
	1/19	0.091	0.15	10			
	3/9	2.4	0.23	10			
	5/11	0.23	0.036	10	0.0	0.01	0.20
	7/20	0.23	0	2			
	9/21	0.21	0.43	15	0.0	0.01	0.15
Walker River, West near Coleville (116) G 9 2400.00	11/5	0.43	0.15	2			
	1/19	0.43	0.43	1			
	3/19	0.036	0.036	1			
	5/11	0.75	0.23	1	0.0	0.00	0.00
	7/20	4.6	2.4	13			
	9/21	2.4	0.43	1	0.0	0.00	0.00

TABLE D-5
DESCRIPTION OF SALINITY
OBSERVATION STATIONS

STATIONS	MAP REF- ERENCE NUMBER	TIME INTERVAL (a)		LOCATION
		Hours	Min.	
SUISUN BAY				
Crockett		3	30	West end of Carquinez Strait, south shore, 0.2 mile east of Carquinez Bridge on wharf of C and H Sugar Refinery Corporation.
Martinez		3	50	Sampled from Shell Oil Company dock, about 0.6 mile downstream from Southern Pacific Company railroad bridge.
Port Chicago		4	20	South shore of Suisun Bay at U. S. Naval ammunition loading wharf below Port Chicago.
Middle Point				South shore of Suisun Bay, about 0.5 mile upstream from Middle Point at Allied Chemical Corporation yard.
Pittsburg	1	5	00	East end of Suisun Bay, south shore, at Pittsburg Yacht Harbor.
SACRAMENTO RIVER DELTA				
Collinsville	2	5	25	Sacramento River, north bank, at junction with San Joaquin River.
Emmaton	3	5	45	Sacramento River, south bank, 5.9 miles downstream from Rio Vista.
Threemile Slough Bridge	4	5	55	At junction of slough and Sacramento River.
Rio Vista Bridge	5	6	05	At highway bridge near northerly limits of Rio Vista.
Isleton Bridge	6	6	30	Sacramento River, one mile upstream from Isleton.
SAN JOAQUIN RIVER DELTA				
Antioch	7	5	55	San Joaquin River at City Water Works pumping plant.
Antioch Bridge	8	6	10	South shore San Joaquin River at Antioch Bridge.
Jersey Island	9	6	20	San Joaquin River, left bank, approximately 1.5 miles below mouth of False River.
Threemile Slough	10	6	30	Threemile Slough, west bank, of junction of slough with the San Joaquin River.
False River	11	6	40	False River, north bank, approximately 0.75 mile upstream from junction with San Joaquin River.
San Andreas Landing	12	6	55	San Joaquin River, right bank, one mile below the mouth of the Mokelumne River.
Dutch Slough	13	7	05	At Bethel Island Bridge.
Mossdale Bridge	14	10	50	San Joaquin River at U. S. Highway 50 crossing about 3 miles southwest of Lathrop.

(a) Time interval between high tide at Golden Gate and time for taking samples at station.

TABLE D-6

MAXIMUM OBSERVED SALINITY AT BAY AND DELTA STATIONS
FOR SELECTED YEARS
In parts of chloride per million parts of water*

Station (a)												
	1931	1939	1944	1952	1956	1958	1959	1961	1962	1963	1964	1965
Sacramento-San Joaquin System Unimpaired Runoff in percent of average (d)	34	49	62	168	175	166	66	61	92	132	63	152**
Suisun Bay												
Crockett				13,200	15,300	11,900	15,000	19,900	13,900	13,100	14,600	13,000
Martinez	16,900	16,400		8,900	11,900	7,150	10,200	11,600	12,700	11,500	12,900	11,200
Port Chicago				6,900	9,750	5,830	15,640	11,900	9,370	9,200	11,200	9,710
Middle Point											10,100	9,840
Pittsburg				1,200	3,440	1,200	5,110	3,920	3,980	1,350	3,280	1,080
Sacramento River Delta												
Collinsville	12,600	10,400	4,700	783	2,280	550	5,430	4,300	2,430	1,980	3,730	2,080
Emmaton					158	29	2,600	2,070	841	382	1,470	276
Threemile Slough Bridge	8,600	5,900	1,610	175	56	18	1,480	633	232	134	459	103
Rio Vista Bridge	7,400	4,050	550	175	21	17	219	69	52	38	690	26
Isleton Bridge	6,350	2,500	50	125	17	14	20	18	18	14	20	13
San Joaquin River Delta												
Antioch	12,400	9,200	4,000	354	1,270	184	3,410	2,930	1,770	1,040	2,500	920
Antioch Bridge					160	122	2,570	1,360	479	317	892	216
Jersey Island					152	52	1,220		84	136	863	147
Threemile Slough					82	45	1,900	489	130	56	262	60
False River												174
San Andreas Landing					66	46	248	345	57	41	72	29
Dutch Slough	5,100	2,250	690	88	107	110	1,044	825	192	98	434	68
Mossdale Bridge	120	160	130	122	206	219	261	346	308	196	318	170

* Ocean water contains approximately 18,200 parts per million of chloride.

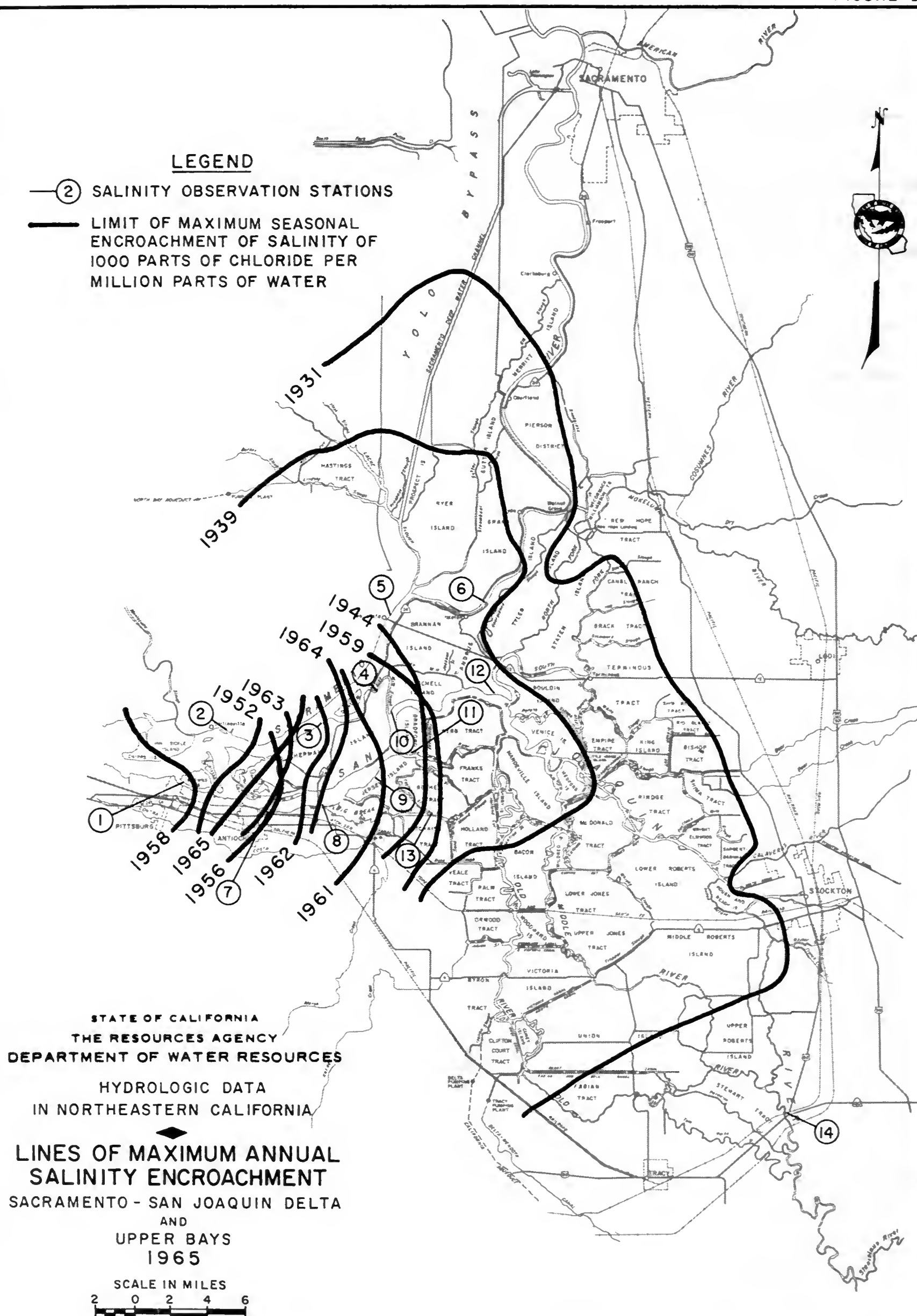
** Preliminary estimate.

a For location see Figure D-5.

b Releases of stored water from Shasta Lake commenced in 1944.

c Releases of stored water from Folsom Reservoir commenced in 1956.

d Average taken as mean annual unimpaired flow at foothill stations of major tributaries for 50-year period October 1907 through September 1957 and do not include runoff from minor tributaries and from valley floor.



SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.	b Taken on following day.
c Taken two days later.	d Taken over one hour off scheduled time.
e Taken on preceding day.	f Taken two days earlier.

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.	b Taken on following day.
c Taken two days later.	d Taken over one hour off scheduled time.
e Taken on preceding day.	f Taken two days earlier.

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.

TABLE -D7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	February 1965							
	2	6	10	14	18	22	26	
Crockett Martinez Port Chicago Middle Point Pittsburg	Suisun Bay							
	4060	2720	3570	5890	2790	4310	7310	
	1810	1830	ae210	al94	a2060	3800		
	27	26	485	792	38	619	d1230	
		d22	19	84	26	26	al36	
		20	35	27		26		
Collinsville Emmaton Threemile Slough Bridge Rio Vista Bridge Isleton Bridge	Sacramento River Delta							
	7	8	9	11	a20	12	16	
	8	5	9	8	9	bd9	9	
	6	7	6	9	9	8	12	
	5	5	9	6	9	6	8	
	3	3	4	5	4	3	4	
Antioch Antioch Bridge Jersey Island Threemile Slough San Andreas Landing Dutch Slough Mossdale Bridge	San Joaquin River Delta							
	27	27	28	22	31	27	22	
	52	39	38	41	a46	39	33	
	a30	26	32		27	32		
	16		18	22	20		18	
	14	14	5	18	18	18	19	
	a61	58	58	54	48	50	48	
	a34		24	42				
Station	March 1965							
	2	6	10	14	18	22	26	30
Crockett Martinez Port Chicago Middle Point Pittsburg	Suisun Bay							
	6250	5210	6360	7020	5670	6290	5920	7160
			4440	7410	4060	4920	ae4530	a4920
		a408	1280	df1580	246	1840	1880	1780
	903	a68	1010	822	236	1580	1240	al720
		d24	bd21	26		d26	25	bd38
Collinsville Emmaton Threemile Slough Bridge Rio Vista Bridge Isleton Bridge	Sacramento River Delta							
	14	12	16	14		25	20	17
	9	a9	13	14	14	15	15	11
	ad8	9	10	10	11	11	9	8
	9	8	8	9	8	8	8	10
	4	7	4	5	6	5	6	6
Antioch Antioch Bridge Jersey Island Threemile Slough San Andreas Landing Dutch Slough Mossdale Bridge	San Joaquin River Delta							
	28	a26	24	23	28	26	24	23
	34	32	35	37	a46	31	31	32
	27	abd23	28	ad26	a26		23	ad23
	22	20	21	22	a19		19	15
	20	a20	11	20	a14	12	16	12
	a46	44	43	46	48	45	46	41
	a44		d21		34	64		a70

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.

b Taken on following day.

c Taken two days later.

d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS *
In parts of chloride per million parts of water

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide. b Taken on following day.
c Taken two days later d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1956		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY	
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.		
1																				71.5	68	72	69	1		
2																				70.5	67	71	68.5	2		
3																				70.5	67	69.5	66.5	3		
4																				69	64.5	69	66	4		
5																				69	64	69	65	5		
6																				69.5	64.5	69	66	6		
7																				70.5	65.5	68	66	7		
8																				72	66	69.5	65	8		
9																				72.5	67.5	69	65	9		
10																				73.5	68.5	68	65.5	10		
11																				73	69	67.5	64	11		
12																				71	67	67	63	12		
13																				72	67	68	63	13		
14																		69.5	66	72	67.5	69.5	66	14		
15																		70	66	72	67	69.5	66.5	15		
16																				71	66.5	71	67	16		
17																				72	67.5	71	67	17		
18																				73	69	70.5	67	18		
19																				74	70	70	67	19		
20																				75	71	70.5	67	20		
21																				76.5	71	71	67	21		
22																				77	72	71	68	22		
23																				77.5	72.5	71	67.5	23		
24																				76.5	72.5	70	67	24		
25																				76	72.5	70	67	25		
26																				75	71	70	67	26		
27																				74.5	70	70	66	27		
28																				73.5	69.5	69.5	65.5	28		
29																				72.5	69	69.5	66	29		
30																				72.5	69	71	67	30		
31																				72.5	68	72.5	69	31		
AVG.																				73	72	71	67	68	65	AVG.
MAX. MIN.																				77.5 66		73.5 64		72 61		MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77.5	7	23	61	9	25

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
		SE 33 19N 3E	77.5	7/23/56	61	9/25/56	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1957		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	67	63	49	49	49.5	46.5	44	40.5	39.5	38.5	*	*	53.5	52	59	58	65	63	74	71	72	71	71	67.5	1
2	65.5	63	51	48.5	48.5	46	42	40.5	42	39	*	*	54.5	52	56.5	56	66	63	74	70	70	67	69	68	2
3	64	62	51	49	48	45	42	40	41	39	*	*	NR	NR	56.5	54	66	64	74.5	70	69	66.5	68.5	66	3
4	66	61	50.5	49	46.5	46	40.5	39.5	41.5	39	*	*	NR	NR	58	55.5	66	64	75	70.5	68.5	64.5	69	66	4
5	65.5	63	51.5	48.5	46.5	45.5	42	40	43	40	*	*	NR	NR	60.5	58	67	64	75.5	71	69	65	70.5	67.5	5
6	NR	NR	52	49	45	44	44	41	41.5	41	*	*	NR	NR	61	59.5	67	64.5	75	71.5	69.5	66	71	68	6
7	NR	NR	52	49	45	43	NR	NR	42	41.5	*	*	NR	NR	60	59	67	64.5	75	71	70	66.5	72	68	7
8	NR	NR	51	48.5	44.5	42	NR	NR	45	43	*	*	51.5	NR	57.5	57	67	64	75.5	71.5	71	67	72	68.5	8
9	64	NR	52	49	44	41.5	NR	NR	44	43	*	*	52	50	57.5	56	65	64	76	72	71.5	67	72	68	9
10	62	61	52	49.5	42.5	41.5	NR	NR	46	44	*	*	53	51	56.5	54.5	66	63	75.5	72.5	72	68.5	71	68	10
11	62	60	52	49	43	41	40	38.5	47/5	44	*	*	53	51.5	57	55	66	64	76	72	73	68	71	67.5	11
12	61.5	59	51	48	42.5	41	42.5	40	48	46.5	*	*	54.5	52	56	54	67	64.5	76	73	71	69	70.5	68	12
13	61	58	51	48	43	41	42	41	48.5	46.5	52.5	51	54	53	56	54	67.5	64.5	74.5	71.5	70	68	71	67.5	13
14	60.5	57	49	47.5	44	42	43.5	41	48.5	47	52.5	50	55	53.5	56	54	66.5	64	75	71	70	67	70.5	67.5	14
15	NR	NR	54	48.5	44	42	44	42.5	50	47	53.5	50	53	51	57	54	66	63	75	71.5	69	66	70	67	15
16	NR	NR	54	51.5	44	42	44	42	49	47	51.5	50	52.5	51	59	55	66	62.5	76	72	69	65.5	69.5	66.5	16
17	61.5	57.5	53.5	51	43	42	43	41.5	NR	NR	50	48.5	51.5	50	59	57	67.5	63	75.5	71.5	69	65.5	68.5	66	17
18	62	58.5	53	50.5	44.5	42	43.5	41.5	NR	NR	50.5	48.5	51	49	57	52.5	68.5	64	74	71	67.5	65.5	69	65.5	18
19	61	58	52	50	42.5	42	42	40	NR	NR	52	50	51	50.5	52.5	50	69	65	74.5	71	68	64	68	65.5	19
20	59	56.5	52	49	42	41	40.5	40	48	46	57	51.5	51	49.5	50	50	71	65.5	74	71	68.5	65	68.5	65	20
21	58.5	55.5	51.5	49	42.5	40.5	42	40	*	*	55	53	51.5	49	53	50	71	67	73.5	70	69	65.5	68	64.5	21
22	59	55	51	48	42.5	40	42	40.5	*	*	54	51	52.5	51	55	53	71	67	74	70	70	66	68.5	64	22
23	60	57	51	47.5	41.5	40	42	41	*	*	52.5	50	54	52	56	54	72.5	67.5	74.5	70	71.5	67.5	69	64.5	23
24	57.5	55	50	47.5	41.5	39	41.5	41	*	*	53	50.5	55	53	57.5	55	74	69	75	71	72	69	69	65	24
25	56	53.5	50.5	47	42.5	39.5	43.5	41	*	*	55.5	52	55	53	59	57	74.5	70	75.5	71	71	69	68	65	25
26	54.5	53.5	50	46.5	43	39.5	42	40.5	*	*	58	55	55.5	53	61	59	75	70	74.5	71.5	71.5	69	66.5	64.5	26
27	54.5	52	49	46	43	39.5	42	40	*	*	57	55	57	53.5	62	60.5	75.5	71	74.5	71	71	67.5	66.5	65	27
28	53.5	51	49	45.5	43	40	42.5	40.5	*	*	58	55.5	58	54.5	62	61	76.5	72	74.5	71	70	67.5	66	64	28
29	51.5	50	48.5	46	42.5	39.5	42.5	40.5	56.5	55	60.5	NR	62	60	60	60	76	72	74	70.5	69.5	67	64	62.5	29
30	50	50	49.5	46	41.5	39.5	41.5	39.0	55	53	61	59	63	61	61	61	75.5	72	74.5	71	69	66	65	62	30
31	50.5	49			43.5	41	41	38	54.5	53				65	62				73	70		67			31
AVG.	60	57	51	48	44	42	42	40					54	52	58	56	69	66	75	71	70	67	69	66	AVG.
MAX.	67		54		49.5		44						61		65		76.5		76		73		72		MAX.
MIN.	49		45.5		39		38						49		50		62.5		70		64		62		MIN.

*Record incomplete.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76.5	6	28	38	1	31

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	77.5	7/23/56	38	1/31/57	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1958		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	65.5	63	57	55	45	44	44	43	46	45.5	47	46	NR	NR	54	51.5	61	60	68	66	77	74	75	72	1
2	65	62.5	55.5	53.5	44.5	43.5	44	43.5	46.5	45	46	45	47	45	54.5	52.5	60.5	59	68.5	66	76	73	75	72	2
3	63.5	62	53.5	52	44	43	45	44	47	45.5	46	45	47	46	54	53	59	57.5	69.5	66.5	76	73	74	71.5	3
4	62.5	61	53	51	44	42.5	44.5	44	46	46	46.5	45.5	48	47	54	53	59	56.5	71	68	77	74	73	71	4
5	61	59.5	52	50	44	42.5	45	43	45.5	45	46.5	46	49.5	49	54.5	53	62	59	72	69.5	77.5	74	73	70	5
6	59	58	51.5	49.5	44	43.5	43	43	46	45.5	47.5	46.5	50.5	50	55	54	62	60	73	70	78	74	73	69	6
7	58.5	56	50.5	49	44.5	43.5	43.5	43	48	46	48	46	53	51.5	54.5	53	62	60	73.5	71	76	73.5	71	70	7
8	58	56.5	52	50	44.5	44	42.5	42	48	47	46.5	46	52.5	50.5	57	54	60	59.5	74	70.5	75	73	74	70	8
9	58.5	57	51	50	44	44	42.5	42	47	46.5	46	45	54	53	59	56	62	59	74	71	75.5	72	75	72	9
10	58.5	57.5	51	50	44	44	44	42.5	47	46.5	45.5	45	55	54	59	55	63	71	74	71	76	73	74	71	10
11	60.5	58	51	50	44	43.5	45	44	47	46.5	45.5	45	56	55	56.5	55	62	60.5	75	71	77	73	72	70.5	11
12	59	58	50	49.5	43.5	43.5	45	44.5	59	47	46.5	45	55.5	55	55	54	59.5	58	75	71	77	74	72	69	12
13	58	57.5	51	50	44	43.5	45	44	47	46.5	46	45	55	54	56	53	58	55.5	73.5	71.5	78	74.5	71	69	13
14	58	57	51.5	50	44	43.5	44	44	47	46.5	46	45	54	54	58	55	62	57	74	71	78	75	71	68	14
15	59	57	49	47.5	44	43	43.5	43	48	47	45	45	54	53.5	60	57	64	61	74	71	78	75	71	68	15
16	59	57.5	48.5	47	47	44	43.5	43	48	48	45.5	45	54	53.5	61	59	65	62	72.5	71	76.5	75	71.5	68.5	16
17	59.5	57.5	47	46	48	46.5	44.5	43.5	48	48	46	45	54	53.5	61	60	65.5	63	73.5	70	77	74	71	68.5	17
18	59	58	46.5	46	47	46.5	45	44	48	48	47	46	54	53	60	49	66	64	74	71	77	74	72	69	18
19	59	58	47.5	47	46	45	44	43	48	47	47.5	46.5	54	54	60	59	65.5	63.5	73	71	76	74	72.5	69	19
20	58	56.5	48	47	46	45	43	42.5	47.5	47	50	47.5	54	53.5	60	59.5	66	64	73.5	70.5	76	73	71.5	69	20
21	57	56	48.5	47.5	48	46	43	43	49	47.5	49	48	55	54	60	59	67	65	75	71	77	74	71	68	21
22	57	56	48.5	47.5	46.5	44	43	42.5	50	49	48	46.5	54	52	60	58	68	65.5	76	72	77.5	75	69	68	22
23	56.5	55.5	48	47	44	42.5	42.5	42	49.5	49	47	46.5	52.5	51	58.5	57.5	69	66	76	73	77	75	69.5	67	23
24	56	55	47	46	43	42	43.5	42.5	52	48	47.5	46.5	51	49	59	57	68	67	76	73	77	74	68.5	65.5	24
25	57.5	56	46	45.5	42.5	42	45.5	43	48	46	NR	47.5	52	49.5	60.5	58	68	66	77.5	74	77	74	68	65	25
26	60	57	46	45.5	43	42.5	47	45	47	46.5	NR	NR	53	51	61	59	69	67	78	74	77	74	69	65.5	26
27	59	57.5	46.5	45.5	44	43	47	47	47.5	47	NR	NR	52	50.5	60.5	58	70	67.5	78	74	76	74	69	66	27
28	58.5	46.5	46	45.5	44.5	44	48	46.5	47.5	46.5	NR	NR	53	50.5	61	59	69.5	67	77	75	76.5	73.5	69	66	28
29	58	55.5	46	45.5	45	44	48	47			NR	NR	54	51.5	62	59	68	66	77	74	76	73.5	69	67	29
30	56.5	55	46	45	45	44.5	47.5	46			NR	NR	53	51.5	62	60	68.5	66	78	74	75	73	70	67	30
31	56.5	54.5			44.5	43.5	46	46			NR	NR			62	60			76.5	74	75	72			31
AVG.	59	58	50	48	45	44	45	44	48	47	47	46	53	52	58	56	64	62	74	71	77	74	71	69	AVG.
MAX.	65.5		57		48		48		52		50		56		62		70		78		78		75		MAX.
MIN.	54.5		42.5		42		42		45		45		45		51.5		55.5		66		72		65.5		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	7	27	42	1	23

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	78	7/27/58	38	1/31/57	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1959		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	70	67	59.5	58	49	49	46	45	45	43	48	47	54.5	51.5	62	60	71	66.5	78.5	76	84	81.5	71.5	68	1
2	71	67	59	57	49.5	49	46	45	44	43	49	48	56.5	54.5	60	58	72	67.5	79	75.5	83	80	72	68.5	2
3	69	67	59	56.5	50	49	45	43	44	43	49.5	48.5	58	55.5	58	56	72.5	68.5	79	75	83	79.5	71	67.5	3
4	68.5	67	59	57	50.5	49.5	43	42	44	43	49	48	58	56	58	55	74	69.5	78.5	75	83	80	72	68.5	4
5	68	66	59	57.5	51	50	43	42	44	43	49	48	59	56	59.5	56	74.5	71	78	75	82.5	79.5	72	69	5
6	67.5	65	60	58	50	49	44	43	46	44	49	48.5	59	57	62	57.5	74	72	78	75	83	79	72	69	6
7	69	66	60	58	49	48	45	43.5	46	45	49	48.5	58	56	63.5	60	73.5	71	78	75	84	81	72.5	69	7
8	68	65.5	59	58	47	47	46.5	44	45	44	49	48	57	55	65	61	74	70.5	78	75	86	82	72	69	8
9	68	65	59	58	47	47	46.5	45	44	44	49	48	57.5	55	64	62	73	70	78.5	75	86.5	83	73	70	9
10	68.5	65.5	58	57.5	48	47	47	46	44	44	49.5	48.5	58	55	65	62	74	70	78	76	87.5	83.5	73	70	10
11	69	65.5	57.5	57	48.5	47.5	46	46	44	43	49.5	48.5	59	56	66.5	63	75	70	78	76	86	83	73	70	11
12	67.5	64.5	56	55.5	50	49	48	46	44	43	50.5	48.5	58	56	68	64	76	72	80	76	83.5	82	72.5	70	12
13	68	65	56	55	49	49	47.5	47	44	43	52	50	58.5	56	67.5	65	76	72	80	77	83.5	80.5	70	68.5	13
14	67	65	56	54	49	48.5	47	46.5	44.5	43	52	51	59	56	67	65	74	71.5	81	77	84	80	68.5	67	14
15	67.5	65	54	52	49	48	46.5	46	44	42.5	52	51	58.5	56	66	63.5	75	71	81.5	78	84	81	69	67	15
16	67.5	65	52	51	49	48	46.5	46.5	46	43	52.5	51	59	55.5	64	62.5	75	71	83	79	83.5	80.5	68.5	66	16
17	67	65	51	50	48.5	48	46.5	46	45	44	53.5	51	59	56.5	64	61	75	72	82.5	79	84	81	66.5	65	17
18	67.5	64.5	50	49	48.5	47.5	46	45.5	45	44.5	54.5	51.5	58.5	56	64	61	77	73	82	79	83	80	65	63.5	18
19	65.5	64.5	50	49	48	47.5	45	44	45	44.5	53.5	51.5	58.5	56	65	62	78	74.5	82	79	82	79	65	63	19
20	63.5	61.5	50	49	48	47.5	44	43	45	45	54.5	51.5	59	56	66	62.5	79.5	76	82.5	79	81	78	64.5	62	20
21	63	60.5	51	50	48	47	43	43	45.5	45	53	52	60	57	67	63	81	77	82	79	81.5	78	65	61	21
22	62	59.5	51	50	48	47	45	43	46	45	52	51.5	61	58	66	65	81.5	78	83	80	80	77	66	62	22
23	61	59.5	50.5	50	49.5	48	45	43.5	46	45	52	51	61.5	58.5	65	64	82	79	84	80.5	79	76	66	63	23
24	62	59	51	50	51	49.5	45.5	43.5	46	46	52	50	63	60	65	62	82	79	85	80	77	75	67	63	24
25	61	60	51	51	51	49	45.5	43.5	46.5	46	50.5	50	61	60	65.5	62	79	77.5	84	82	77.5	74	67	64	25
26	61	59	51	51	50	49	46	45	47	46	52.5	50	61	59	66	63.5	80	77	82	80	76	73	67.5	64	26
27	61.5	59	52	51	49	47.5	47.5	46	48	47	52.5	50.5	58.5	56.5	67	64	79	76	81	78	74	70	66	63	27
28	61.5	59	52	51	48	47	47	46.5	48	47	52	51	60	57	67.5	64.5	78	76	82	78	73	69	65	62	28
29	61	59	51.5	50.5	47	46	47	46			52	50.5	61.5	58.5	68	65	78	75	82	79	72	69	64	61	29
30	60.5	59	50	49	47	46	46	45			53	51	62	61	69	66	79	75	83.5	79	72.5	69	63.5	61	30
31	60	59		46.5	46	45	44				52.5	50		70	66			84.5	80.5	71.5	68				31
AVG.	66	63	55	53	49	48	46	45	45	44	51	50	59	56	65	62	76	73	81	78	81	78	69	66	AVG.
MAX.	71		60		51		48		48		54.5		63		70		82		85		87.5		73		MAX.
MIN.	59		49		46		42		42.5		47		51.5		55		66.5		75		68		61		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
87.5	8	10	42	1	3

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	38	1/31/57	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1960		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	63	60	54.5	53	46	45.5	41	40	48	46	46	45	50	47	54	53	66	62	NR	NR	NR	NR	71	NR	1
2	63	60	54.5	52	46	45	40	30	47	45	45	44.5	51.5	49	55	52	67	63.5	NR	NR	NR	NR	70.5	67.5	2
3	62.5	60	54	52.5	46	45.5	39	38	45	43	46.5	44	53.5	51	55	53	68	64.5	NR	NR	NR	NR	71	69	3
4	62	59	54	52	46.5	45.5	39	38	44	42.5	47	45	54.5	52	55	52	68.5	65	NR	NR	NR	NR	70	67	4
5	61.5	59	54	51.5	46	45	39	38	45	44	47	45.5	54.5	53	55	52	68.5	65.5	NR	NR	NR	NR	70	67	5
6	61	58.5	54	52	45	44	38	38	47	45	46	45	54	52.5	56.5	53	69	66	NR	NR	NR	NR	70	67	6
7	61	58	53	51	44.5	43.5	39	38	48	47	47	45	54.5	52.5	58.5	55.5	68	65	NR	NR	NR	NR	70	67	7
8	61	59	52	40	43.5	43	NR	NR	48	45	47	46	54	52	59	56.5	68	64.5	NR	NR	NR	NR	70	67	8
9	63	60	51.5	49	43	42.5	NR	NR	46	45	47	46	54.5	52.5	59	56.5	68.5	65	NR	NR	NR	NR	68.5	67.5	9
10	63	60	51	49	43	42	NR	NR	46	45	47	46	53.5	52	59.5	57	69	65.5	NR	NR	NR	NR	71	67	10
11	63	60	51	49	43	42	NR	NR	46	45	47	46.5	53	51.5	60	57	70.5	66.5	NR	NR	NR	NR	72	68.5	11
12	63	60	51	48.5	42.5	42	NR	NR	46	45.5	47	47	51.5	50	59.5	58	71.5	67.5	NR	NR	NR	NR	72	69	12
13	62	59	51	49	42.5	42	NR	NR	46.5	46	47	47	52.5	49.5	58.5	56	72	68.5	NR	NR	NR	NR	71.5	68.5	13
14	61.5	59	50	49	42.5	41.5	41.5	41	46	45	48	47	54	51	58.5	56	72.5	69.5	NR	NR	NR	NR	71	68	14
15	62	59	49.5	48	42.5	42	41.5	41	45	44.5	47	47	53	51	59	56	73	69.5	NR	NR	NR	NR	71	67	15
16	62	59.5	48	47	42	41.5	42	40.5	46	44.5	47	46	53	50	60	57	73.5	70	NR	NR	NR	NR	69	67	16
17	61	59	48.5	48	41.5	41	41	40	45.5	44	47.5	46	53.5	50.5	59.5	57	73.5	70	NR	NR	NR	NR	69.5	67	17
18	60	59	48	47.5	42	41	40	39.5	45.5	44	49	47.5	53	51.5	58.5	56.5	73	70	NR	NR	NR	NR	69.5	66	18
19	NR	NR	48	47	43	41.5	41	39	45	44	51	49	54.5	51.5	59	56	72.5	69.5	NR	NR	NR	NR	68.5	66.5	19
20	NR	NR	48.5	48	41.5	41	40.5	39	45	44	51	50.5	55	52	58.5	57	71	69	NR	NR	NR	NR	68	66	20
21	NR	NR	49	48	41.5	41	41	40	44.5	44	53	51	55	53	58	56	71.5	68	NR	NR	NR	NR	66.5	65	21
22	NR	NR	48	47.5	42	41	41.5	41	44.5	43.5	53	51.5	53.5	52	57	55	71	68	NR	NR	NR	NR	66	64	22
23	62	NR	49	47.5	42	41	43.5	41.5	44.5	44	52.5	50.5	51.5	49	55	52	72	68	NR	NR	NR	NR	66.5	63	23
24	62	60	48.5	48	43	42	43.5	43	44	43	52.5	51	49.5	47.5	53	51	72.5	69	NR	NR	NR	NR	67	63.5	24
25	62	60	48.5	47.5	43.5	42.5	45	43.5	45	43	53	51	48.5	46.5	52	50	72	69	NR	NR	NR	NR	67	63.5	25
26	61	60	48.5	47.5	43	43	46	45	44	43	53	52	49	47	53	49.5	72	69	NR	NR	NR	NR	67	63.5	26
27	60	59	49	48	43	42	46	44	45	44	52	51	50	48	56.5	52	72	69	NR	NR	NR	NR	67	63.5	27
28	59	57.5	48.5	47	42.5	41.5	44.5	44	45	44	49	47.5	50.5	48	59.5	55.5	NR	NR	NR	NR	NR	NR	66	64	28
29	58	56.5	47	46.5	42.5	41	46	45	45.5	44.5	48	46.5	52.5	48.5	61	57.5	NR	NR	NR	NR	NR	NR	66	63.5	29
30	57	55.5	46.5	46	41	40.5	46.5	46			48.5	47.5	55	51	62.5	59	NR	NR	NR	NR	NR	NR	66.5	63	30
31	56	54.5			41	40	46.5	45.5			47	46			64.5	61			NR	NR	NR	NR			31
AVG.	61	59	50	49	43	42	42	41	46	44	49	47	53	50	58	55	71	67					69	66	AVG.
MAX. MIN.	63	54.5	54.5	46	46	40	46.5	38	48	42.5	53	44	55	46.5	64.5	49.5	73.5	62					72	63	MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
			38	1	5

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	38	1/5/60 1/31/57	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1961		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66.5	63.5	55.5	53	44	43	40.5	39.5	45.5	45	46	45	52	50.5	53	52	58	55	73.5	69.5	75	71.5	74.5	72	1
2	66	63.5	54	53	45.5	44	40	39	45	45	47.5	46	54	52	54	51	58	55	73.5	70	74.5	71.5	73	70	2
3	66	63	54.5	53	46	44.5	39	38.5	46.5	45	47.5	46.5	56	53.5	54.5	51.5	60.5	56.5	73	70	75.5	72	73	70	3
4	66	63	53	52	45	43	38	37.5	46.5	45.5	47.5	46.5	55	53.5	55	52	63	59	72	69	76.5	73.5	72.5	70	4
5	65	63	53.5	51	43	42.5	37.5	37	46	45.5	47.5	46.5	53.5	51.5	54.5	52	64	60.5	71	68	78	74	72	69	5
6	65	63	54	52	43	41.5	37	37	46	45.5	48	46	52.5	50	53	51.5	64.5	61.5	71.5	68.5	76.5	75	71	69	6
7	65	63	52.5	51	41	41	37.5	36	46.5	45.5	46	45	53	50.5	53	50	66	62	71.5	68.5	77.5	74	70	68	7
8	64	62	52	51	41	39.5	38	37	46	45	46.5	45	52.5	49.5	55	51	65.5	62.5	72	69	78	75	70.5	68	8
9	61.5	59.5	52	51	40.5	39.5	39	38	46	45	46.5	44.5	52.5	50	55	53	66.5	63	73	69	78	75	70	68	9
10	59	58	52	50.5	40	39.5	40	39	47.5	45.5	47	46	53	50	55	53	67.5	63.5	73.5	70	76	74.5	70.5	68	10
11	59	57	52	51	40.5	39.5	40	39	47.5	46.5	49.5	47	53.5	50.5	53	51	67.5	64.5	74.5	71	77	74	70.5	68	11
12	58	56	52.5	52	40	40	41	40	46.5	44.5	47.5	46.5	53	51	52	49.5	68.5	64.5	74.5	71.5	78	74	71	68	12
13	58	55.5	51.5	51	40	40	42	41	45.5	44	48	46.5	51.5	49.5	53	50	69	65	75.5	72	76.5	74	69.5	67	13
14	59	56	51	50	40.5	40	42	42	44	43.5	49	47.5	52.5	49	55	51.5	70	66	76	72.5	76	73	69	66	14
15	58.5	56	50	47.5	40	40	42	41.5	46	44	48.5	47.5	54	50.5	57.5	53.5	71.5	67.5	76	73	75.5	73	70	66	15
16	58	55	47	46.5	41	40.5	41.5	41	45	44	47.5	46.5	55.5	52	58	55	73	69.5	76	73	74.5	72	67.5	67	16
17	57	55	46	45.5	43	41.5	41	40.5	46	44	47	46	55.5	54	58.5	55.5	74	70.5	76	72.5	74	71	68	65	17
18	56.5	54	46	46	44.5	43	40	40	45	44	47.5	47	55	53.5	59.5	56	74	70	76	73	74.5	71	68	65	18
19	57	53.5	46	45.5	44.5	43	39.5	39	44	43	48.5	46.5	53.5	51	61	58	74	70	76	73	73.5	71	68	65	19
20	57.5	54.5	45	44.5	43.5	43	40	39.5	44	43	47.5	46.5	52	50	59	56.5	74	70.5	76	72.5	74.5	70	67	65	20
21	58	55	46	45	43	42.5	40.5	40	45	44	47.5	47	50	48.5	58.5	55	74.5	71	76	72.5	75	72	67	64	21
22	58	55	45.5	44.5	42.5	42	40.5	39.5	45.5	44	48.5	47.5	48.5	47	59	56	74	71	77	73	75	72	68	65	22
23	58	55.5	45	44.5	42.5	42	41	40	45.5	44.5	49	47.5	47.5	45.5	59	56.5	74.5	71	77	73.5	75	72	67.5	65	23
24	57	55	47	45.5	42	41.5	42	41	46	45	49	47.5	47.5	44.5	59	56	75	72	77	74	75.5	72	67	64.5	24
25	57	55	47	46	41.5	41	42	41	46	45	48	47	49	45.5	59.5	56.5	75	72	77	74	74	71	67	64.5	25
26	57	55	46.5	46	41	40.5	42	41	46	45	48.5	46	51	47.5	60.5	57.5	75.5	71.5	76.5	73.5	72.5	71	67	64.5	26
27	56	54	46	44.5	41	40	42.5	42	46	45.5	46.5	45.5	52	49	60	57	74	71.5	77	73.5	72.5	70.5	66	64.5	27
28	57	54	44.5	43	41	40	43	42	46	45	46.5	45.5	53.5	50.5	59.5	57	73.5	70	77	73.5	72	69	66	64.5	28
29	57	55	43	42	40.5	40	43	42.5			47	46	54	52	58	57	72.5	69.5	76	73.5	73.5	70	66.5	64.5	29
30	56	54	43.5	42	41	40	43	42			49	47	54.5	51	58	56.5	72.5	69	75	72	74	71	66	64	30
31	56	53.5			41	40	45	42.5			51	49			57.5	55			75	71.5	74	71			31
AVG.	60	57	49	48	42	41	41	40	46	45	48	46	53	50	57	54	70	66	75	72	75	72	69	67	AVG.
MAX.	66.5		55.5		46		45		47.5		51		56		61		75.5		77		78		74.5		MAX.
MIN.	53.5		42		39.5		36		43		44.5		44.5		49.5		55		68		69		64		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	8		36	1	7

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	36	1/7/61	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1962		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	65.5	64	52	49.5	47	47	40	40	40	39	40	39	51	49	51	48	60	57	71	67	75	72	74	71	1
2	66	64	51	48.5	47	46	40	40	41	40	41	38	50	49	53	50	61	58	71	68	74	72	74	71	2
3	65	63	50.5	49	46	45	40	40	42	41	43	41	51	49	54	52	60	58	70	67	74	70	74	71	3
4	65	62.5	52	48.5	46	45	41	39	43	42	42	41	51	50	56	54	59	57	71	67	73	69	72	69	4
5	65.5	62	52	50	45	44	41	40	43	42	44	42	52	50	55	54	58	56	73	68	73	70	72	69	5
6	65	62	52	50	44	43	41	40	43	42	44	42	52	50	55	53	59	56	73	68	73	70	72	69	6
7	63.5	61.5	51	49	43	42	41	40	44	42	44	44	50	49	56	53	61	57	74	70	73	69	72	69	7
8	61	59	50	48	43	42	42	41	44	43	45	44	50	48	55	52	62	59	73	70	71	69	72	69	8
9	60.5	59	50.5	47.5	42	40	43	42	46	44	47	45	51	49	52	50	63	60	73	70	72	69	71	69	9
10	60.5	59	49	48	40	39	43	42	46	43	46	44	50	49	51	50	62	60	73	70	72	68	70	68	10
11	60	59	49.5	48	39	38	45	43	43	43	45	43	50	48	52	49	62	59	72	69	73	69	70	68	11
12	61	58.5	49.5	47.5	39	38	45	44	43	43	44	43	52	49	53	50	62	59	72	68	73	70	69	67	12
13	62.5	59.5	49	47	38	38	44	42	45	43	44	43	52	50	54	51	61	58	72	69	74	70	69	66	13
14	63	61.5	49	48	39	38	42	40	45	44	44	42	53	51	54	52	62	59	72	70	74	71	70	67	14
15	63	61.5	48	46	40	39	40	38	45	44	45	43	52	51	54	51	62	59	73	70	73	70	70	67	15
16	63	61.5	46.5	45	40	39	39	38	44	44	46	44	51	50	55	52	63	70	74	70	73	70	69	66	16
17	62.5	61	46	44	40	39	39	38	44	44	47	45	51	50	55	52	66	63	72	70	74	71	69	66	17
18	62	60	45.5	43.5	40	39	39	38	44	44	47	44	52	50	56	53	69	66	72	68	74	71	68	65	18
19	61	60	44.5	43	41	40	40	39	44	44	48	46	51	49	54	52	69	67	72	68	74	71	67	65	19
20	61	59	44.5	42.5	43	41	42	40	44	43	48	47	51	48	54	50	70	67	73	69	74	71	68	64	20
21	59.5	58	44.5	43	44	43	42	40	43	42	48	46	51	49	55	51	69	67	74	71	74	71	68	65	21
22	59	56.5	44	43	44	43	40	38	44	43	47	46	53	50	57	54	70	68	74	71	74	70	68	65	22
23	57.5	55.5	46	43.5	44	43	39	37	45	44	45	44	54	51	57	54	72	68	74	70	74	70	67	64	23
24	56.5	55.5	46	45	43	42	37	36	45	44	45	43	55	52	55	52	72	68	74	71	74	71	67	64	24
25	56	54.5	45	44.5	42	42	36	35	44	42	47	44	55	53	53	50	71	68	74	70	75	72	67	64	25
26	56	54.5	46	44.5	43	42	35	34	42	41	49	46	53	52	53	49	69	66	76	71	74	71	67	64	26
27	56	55	48.5	46	42	41	37	35	41	39	49	47	52	49	56	51	69	66	77	73	74	71	64	62	27
28	55	53	49	48.5	42	42	39	37	40	39	49	47	49	46	57	53	70	67	77	74	70	72	63	62	28
29	54	51.5	49	48	42	41	41	39	49	48	47	45	47	45	58	55	70	66	77	74	71	68	65	62	29
30	53	50.5	48.5	47	41	41	42	40	51	49	49	46	49	46	59	56	71	67	77	74	72	68	66	62	30
31	52.5	50			41	40	41	39	51	50					59	56			76	73	74	69			31
AVG.	60	58	48	46	42	41	41	39	43	42	46	44	51	49	55	52	65	62	73	70	73	70	69	66	AVG.
MAX. MIN.	66	50	52	42.5	47	38	45	34	46	39	51	38	55	45	59	48	72	56	77	66	75	68	74	62	MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77	7	28	34	1	26

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1963		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66	62	55	53	45	45	41	40	49	47	49	48	49	NR	54	53	63	61	65	62	71	68	70	66	1
2	66	63	55	54	46	45	40	39	49	48	50	48	48	47	54	52	62	60	65	61	71	68	70	66	2
3	65	62	55	54	47	46	40	39	49	48	50	48	49	47	54	53	61	59	65	62	71	67	71	67	3
4	65	62	55	54	48	47	42	40	50	47	49	48	50	48	53	52	60	58	65	62	61	67	69	67	4
5	64	62	54	54	46	46	43	41	49	48	48	47	52	51	54	52	60	57	66	63	71	67	67	66	5
6	63	61	54	53	46	46	45	43	49	48	48	46	53	50	54	53	60	56	66	63	71	68	70	65	6
7	63	60	53	52	46	45	45	44	50	49	47	46	50	49	54	52	61	57	67	64	71	68	70	66	7
8	64	61	52	51	45	44	44	43	51	50	48	47	49	48	52	49	62	59	67	64	71	68	71	67	8
9	63	62	52	51	45	44	44	42	51	50	48	47	50	49	49	48	63	60	67	64	71	68	70	67	9
10	63	60	53	51	44	43	43	42	51	50	49	48	49	49	48	47	63	61	68	64	72	68	70	66	10
11	60	58	53	51	44	43	43	42	51	50	50	48	49	49	48	47	63	60	69	65	72	69	68	66	11
12	58	55	53	51	43	42	44	42	50	50	51	49	50	49	50	47	62	60	69	65	72	69	67	64	12
13	59	54	52	51	42	42	44	42	50	49	52	46	51	50	51	49	64	60	70	66	72	68	67	64	13
14	59	53	52	51	44	42	45	42	50	49	46	45	52	51	53	50	66	62	70	66	72	68	67	65	14
15	54	53	52	50	45	44	42	40	50	49	46	44	51	51	54	52	67	64	70	67	72	68	66	65	15
16	54	53	51	50	47	45	41	40	49	48	45	42	51	50	56	53	69	66	69	66	72	68	67	64	16
17	53	51	50	49	48	47	41	40	49	48	44	42	50	49	58	55	69	66	69	65	72	68	67	64	17
18	51	50	49	48	47	46	41	39	49	48	44	41	49	47	58	56	69	66	70	66	72	68	66	63	18
19	52	50	49	48	46	46	41	40	49	48	46	43	47	46	58	56	69	66	70	67	72	68	65	64	19
20	54	52	49	48	46	45	41	40	48	48	47	43	46	45	58	57	69	66	70	67	71	67	66	63	20
21	54	52	48	48	45	45	42	40	51	48	47	45	47	45	57	56	68	65	70	67	70	66	67	64	21
22	54	52	48	47	45	44	41	40	50	49	50	47	49	46	58	56	67	65	71	67	69	65	65	64	22
23	53	51	48	48	44	44	42	40	50	49	49	48	50	48	58	56	66	63	70	67	69	64	66	63	23
24	53	52	49	48	44	42	42	40	50	49	50	47	51	49	58	56	66	62	69	66	69	64	67	63	24
25	54	53	49	48	42	41	42	41	50	49	51	48	51	50	59	56	67	63	69	66	69	65	67	63	25
26	56	54	49	48	41	40	42	41	50	49	51	50	51	50	60	57	67	64	70	66	69	65	67	64	26
27	55	54	49	48	40	39	42	41	50	49	50	50	52	50	60	58	66	63	71	67	69	65	68	65	27
28	55	53	48	47	41	40	41	41	49	49	50	47	53	51	60	58	66	63	71	68	69	65	69	65	28
29	55	53	47	46	41	40	41	41			47	46	55	52	60	58	65	62	72	68	69	65	69	65	29
30	55	53	46	45	41	40	43	41			48	46	55	53	61	57	65	62	72	68	69	65	69	65	30
31	55	53			41	40	47	43			NR	NR			62	59			72	68	69	66			31
AVG.	58	56	51	50	44	44	42	41	50	49	48	46	50	49	57	54	65	62	69	66	71	67	68	65	AVG.
MAX.	66		55		48		47		51		51		55		62		69		72		72		71		MAX.
MIN.	50		45		39		39		47		41		45		47		56		61		64		63		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
72	8	14	39	1	2

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	68	64	55	53	45	45	44	43	45	44	44	43	50	48	53	51	63	59	68	65	73	68	67	64	1
2	67	64	55	53	45	45	44	43	46	44	46	43	49	47	51	49	64	60	68	64	73	68	66	63	2
3	67	63	54	52	45	45	44	43	46	45	46	43	50	47	48	47	63	60	68	65	73	68	67	62	3
4	66	63	53	52	45	44	*	*	46	44	46	43	50	48	48	46	63	60	68	65	74	68	67	63	4
5	63	62	52	52	45	45	*	*	44	42	47	44	49	47	48	46	64	60	68	65	63	69	67	63	5
6	65	61	52	49	45	45	*	*	42	41	45	44	49	47	49	46	62	61	70	66	73	68	67	63	6
7	65	62	51	50	45	44	*	*	42	41	46	43	50	47	51	47	63	59	71	67	72	69	67	63	7
8	64	62	50	49	45	44	*	*	42	41	46	42	51	47	53	49	61	58	70	67	73	68	67	64	8
9	65	62	50	50	45	45	44	43	42	41	47	43	52	49	54	51	57	55	71	67	73	68	67	63	9
10	63	61	52	50	45	44	44	43	43	42	47	44	54	51	56	53	57	54	72	67	74	68	67	62	10
11	62	60	52	50	44	43	44	43	44	43	45	44	55	52	58	55	58	55	73	67	73	69	68	64	11
12	61	59	51	51	43	42	45	44	44	43	45	43	54	52	59	56	61	56	73	68	73	69	68	64	12
13	60	59	51	51	42	42	46	45	43	42	46	43	53	51	58	56	63	59	74	69	73	69	68	63	13
14	60	58	52	51	42	42	46	44	43	41	47	43	53	50	57	55	65	60	73	68	73	68	68	64	14
15	59	58	52	50	42	42	44	43	43	42	48	44	53	51	57	54	65	62	73	69	72	68	69	65	15
16	60	58	50	48	42	41	44	42	43	41	50	45	53	51	55	54	64	62	75	69	72	68	68	66	16
17	60	58	48	47	41	41	43	42	43	42	50	46	52	50	56	53	66	62	75	70	73	68	68	64	17
18	61	58	48	47	41	41	44	43	44	42	51	47	50	49	56	54	65	61	74	70	73	69			18
19	61	59	47	46	41	40	44	43	44	42	50	47	50	48	58	55	66	62	74	69	72	69			19
20	60	58	47	46	41	41	43	42	45	43	50	47	51	48	58	55	66	62	75	70	73	68			20
21	60	58	46	44	42	41	43	42	45	44	50	46	52	49	58	55	67	62	75	70	73	68			21
22	61	58	45	44	43	42	43	42	45	44	47	45	52	50	58	55	68	63	74	70	73	68			22
23	60	58	46	45	43	42	42	42	45	44	46	44	50	48	58	55	69	65	74	69	73	69			23
24	58	56	47	46	42	41	43	42	46	44	47	44	48	46	59	56	69	66	74	70	74	69			24
25	59	56	47	45	41	41	*	*	45	44	47	43	48	45	60	57	70	66	74	70	74	69			25
26	59	56	46	45	41	41	*	*	45	44	48	44	49	46	60	58	69	66	75	69	73	69			26
27	NR	56	45	44	42	41	*	*	44	43	50	45	52	48	58	56	69	65	74	70	72	68			27
28	58	56	45	45	42	42	*	*	44	42	51	46	55	51	58	55	68	65	75	71	71	68			28
29	57	55	45	45	43	42	44	44	45	42	51	48	56	53	59	55	68	65	76	71	70	67			29
30	57	55	46	45	44	43	44	44			53	49	55	53	60	56	68	65	74	70	70	66			30
31	56	53			44	44	45	44			51	50			62	58			74	70	68	65			31
AVG.	62	59	49	48	43	43	--	--	44	43	48	45	52	49	56	53	65	61	73	68	73	68	--	--	AVG.
MAX.	68		55		45		46		46		51		56		62		70		76		74		--		MAX.
MIN.	53		44		40		42		41		42		45		46		54		64		65		--		MIN.

*For the periods January 4 to 8 and January 25 to 28 the maximum was 44° and the minimum was 43°.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76	7	29	40	12	19

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/19/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1					48	47	43	42	46	45	47	45	50	48	55	54	60	59	68	67	70	68	69	68	1
2					NR	NR	NR	NR	46	45	46	45	49	48	54	51	59	58	68	67	70	69	69	68	2
3					NR	NR	NR	NR	45	45	47	45	49	47	52	50	60	58	69	67	72	70	69	68	3
4					45	44	NR	NR	45	45	47	45	49	47	53	50	62	60	70	68	72	71	68	67	4
5					45	44	NR	NR	46	45	48	46	48	48	52	51	63	62	70	69	72	71	69	66	5
6			54	51	44	43	NR	NR	47	46	47	46	49	48	50	49	64	63	70	69	72	71	66	64	6
7			53	51	44	43	NR	NR	46	45	47	46e	47	46	50	48	63	62	70	69	72	71	65	63	7
8			54	52	45	44	NR	NR	45	44e	48	46	47	46	51	49	63	62	70	68	72	70	65	64	8
9			53	52	46	44	NR	NR	45	44e	47	46e	46	45	53	51	62	61	69	68	71	70	66	64	9
10			52	50	47	45	NR	NR	44	43e	46	46e	46	45	54	51	63	62	68	68	70	70	66	64	10
11			50	49	48	47	NR	NR	43	42	48	46e	47	45	55	53	64	62	68	67	70	68	66	64	11
12			50	48	49	46	NR	NR	44	42	48	47	49	47	55	54	66	64	68	66	69	68	65	64	12
13			49	48	45	44	NR	NR	43	42	48	47	48	47	55	54	65	64	68	67	68	68	65	64	13
14			48	46	44	43	NR	NR	44	42	48	46e	48	47	57	54	64	62	68	67	69	68	65	64	14
15			48	47	44	43	NR	NR	45	43e	48	46	48	47	57	55	62	60	69	68	70	68	65	64	15
16			47	46	44	43	NR	NR	45	43e	48	47e	50	48	57	55	61	60	70	68	70	69	66	64	16
17			46	45	44	43	NR	NR	44	43	48	47e	49	48	58	56	60	60	70	69	71	70	64	63	17
18			47	45	44	43	NR	NR	45	43	48	47e	49	48	57	55	61	59	71	69	71	69	63	61	18
19			46	45	44	43	NR	NR	46	44e	48	47	52	49	57	56	63	61	70	69	70	69	62	60	19
20			46	45	46	44	NR	NR	47	45e	47	46	52	51	58	56	65	62	69	68	70	69	62	60	20
21			46	44	49	46	NR	NR	47	45e	47	45	51	50	58	57	67	64	68	68	70	68	62	61	21
22			46	45	51	48	NR	NR	47	45	48	46	52	50	57	56	68	66	68	68	69	68	62	61	22
23			46	45	51	50	NR	NR	46	45	48	47	53	51	56	55	68	67	69	68	68	68	63	62	23
24			47	45	53	51	NR	NR	45	44	49	48	55	53	56	55	68	66	69	68	68	68	63	62	24
25			47	46	53	52	NR	NR	46	44	49	48	55	54	56	55	67	66	69	68	68	68	63	62	25
26			48	47	52	51	NR	NR	47	44e	48	47	56	54	57	56	66	65	68	67	68	67	63	63	26
27			48	47	51	49	NR	NR	47	45e	48	46	56	55	58	57	67	65	69	68	68	67	63	62	27
28			48	47	49	46	NR	NR	47	46e	48	46	56	55	59	58	67	65	69	68	68	67	62	61	28
29			47	46	46	45	NR	NR			49	47	56	55	60	59	68	66	69	68	68	67	62	61	29
30			47	47	45	44	43	43			49	48	56	54	60	60	68	67	68	68	68	67	62	60	30
31					44	43	46	45			48	48			60	60	68	67	68	67	68	67			31
AVG.	--	--	49	47	47	46	--	--	46	44	48	46	51	49	56	54	64	63	69	68	70	69	65	69	AVG.
MAX. MIN.	-- --	-- --	54 44		53 43		-- --		47 42		49 45		56 45		60 48		68 58		71 66		72 67		69 60		MAX. MIN.

e - Estimated

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
72	8	4	42	2	12

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present
Station located on headwall of inlet structure to Sutter Butte Canal.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	A0 5135	Feather River at Yuba City

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY			
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.				
1																					78	73	69	66	1			
2																					77	72	70	68	2			
3																					78	72	72	69	3			
4																					77	71	72	70	4			
5																					78	74	72	69	5			
6																					80	76	72	69	6			
7																					78	76	70	68	7			
8																					79	75	70	68	8			
9																					77	74	69	67	9			
10																					79	74	70	68	10			
11																					76	74	71	69	11			
12																					75	74	72	70	12			
13																					78	73	70	69	13			
14																					77	72	70	69	14			
15																					74	70	71	60	15			
16																					75	71	72	70	16			
17																					76	72	71	69	17			
18																					76	71	69	68	18			
19																					74	72	68	66	19			
20																					75	72	69	67	20			
21																					Installed 79@ 1555	77	73	68	65	21		
22																						76	73	66	64	22		
23																						81	77	77	71	69	66	23
24																						85	79	76	71	69	67	24
25																						86	81	76	71	69	66	25
26																					86	79	74	71	67	65	26	
27																					84	79	73	70	66	64	27	
28																					84	78	73	69	65	64	28	
29																					89	80	72	68	65	64	29	
30																					76	83	72	68	66	64	30	
31																					80	74	68	64			31	
AVG.																										AVG.		
MAX. MIN.																										MAX. MIN.		

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
39 08 20	121 36 17	SE 23 15N 3E	89	July 29, 1964	64	Sept. 28, 1964		
Station located at Sacramento Northern Railroad Bridge.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A 0 5135	Feather River at Yuba City

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66	64	58	57	47	47	39	38	41	41	47	46	50	50	57	56	62	61	72	70	77	75	72	71	1
2	66	64	57	56	47	47	38	38	42	41	47	47	50	50	57	55	62	61	76	72	77	75	70	70	2
3	67	65	56	55	47	46	38	38	42	42	47	47	50	50	55	52	63	62	76	74	76	75	70	70	3
4	67	65	55	55	46	46	40	38	42	42	47	47	50	50	53	52	64	63	76	74	76	75	70	70	4
5	67	65	55	55	46	45	43	40	42	42	48	47	50	50	53	52	65	64	76	75	77	76	69	68	5
6	67	66	55	54	45	45	44	43	43	42	48	48	50	50	53	52	65	64	77	75	77	76	68	66	6
7	67	66	54	54	45	45	44	42	43	43	48	48	50	50	53	51	64	63	76	74	77	76	66	65	7
8	66	64	54	54	45	45	43	40	43	43	49	48	50	50	54	51	63	62	76	74	76	75	66	65	8
9	65	63	55	54	46	45	40	40	44	43	49	49	50	49	54	53	64	62	75	73	75	75	66	65	9
10	65	64	54	51	47	46	40	40	43	43	49	49	49	48	55	54	65	64	73	71	75	75	66	66	10
11	65	63	51	49	48	47	41	40	43	43	49	49	48	48	57	55	66	65	73	71	75	74	66	66	11
12	64	63	49	49	47	45	41	41	43	43	50	49	49	48	58	56	67	66	74	72	74	72	66	65	12
13	64	63	49	47	45	43	41	41	43	43	50	49	50	49	58	57	67	67	75	73	72	72	67	66	13
14	63	61	47	46	43	43	41	41	43	43	49	49	50	50	58	57	67	66	75	73	73	72	67	66	14
15	63	61	46	45	43	43	41	41	44	43	50	49	50	50	58	57	66	64	77	75	73	73	68	67	15
16	63	62	45	44	43	42	41	41	44	44	50	50	51	50	59	58	65	64	78	76	73	73	68	67	16
17	63	61	44	44	42	42	41	41	44	44	50	50	50	50	60	58	64	62	78	76	73	73	67	64	17
18	62	60	44	44	42	42	41	41	44	44	50	50	50	50	60	58	64	62	77	75	74	73	64	62	18
19	62	60	44	44	43	42	41	41	44	44	50	50	51	50	59	58	66	64	76	74	74	74	62	62	19
20	62	60	45	44	44	43	41	41	44	44	50	50	52	51	58	57	69	66	75	71	74	74	62	61	20
21	61	59	44	44	47	44	42	41	44	44	50	50	52	52	58	57	69	67	73	70	74	74	62	61	21
22	60	59	45	44	47	47	42	42	45	44	50	50	53	52	58	56	69	67	75	72	74	73	62	62	22
23	60	58	45	45	48	47	42	42	45	45	50	50	54	53	57	55	69	68	76	74	74	73	62	62	23
24	60	59	46	45	48	47	42	42	45	45	50	50	55	54	56	54	69	68	76	74	73	73	63	62	24
25	59	58	46	46	NR	NR	42	39	45	45	50	50	58	55	58	56	69	67	76	74	73	73	63	63	25
26	58	58	46	46	NR	NR	39	38	45	45	50	50	58	57	60	57	68	66	74	68	73	73	65	64	26
27	58	58	46	46	NR	NR	38	38	46	45	50	49	58	57	61	59	69	67	73	70	73	73	64	64	27
28	58	58	46	46	NR	NR	39	38	46	46	49	48	59	58	63	60	71	68	75	73	73	73	64	63	28
29	58	58	47	46	NR	NR	39	39	46	46	49	49	59	58	63	62	71	69	75	72	74	73	64	63	29
30	58	58	47	47	NR	NR	41	39	---	---	50	49	58	57	63	62	71	68	76	74	73	72	63	63	30
31	58	58	---	---	41	39	41	41	---	---	50	50	---	---	63	61	---	---	75	75	72	71	---	---	31
AVG.	63	61	49	49	45	45	41	40	44	44	49	49	52	52	58	56	66	65	75	73	74	74	66	65	AVG.
MAX. MIN.	67	58	58	44	48	39	44	38	46	41	50	46	59	48	63	51	71	61	78	68	77	71	72	61	MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	July	16	38	Jan.	

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
39 08 20	121 36 17	SE 23 15N 3E	89	July 29, 1964	38	January 1965	July 22, 1964	Present
Station located at Sacramento Northern Railroad Bridge.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 5340	Old River @ Clifton Court Ferry

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	NR		65		52		NR		49		53		59		NR		71		69		76		75		1
2	NR		66		54		NR		49		52		58		NR		70		70		78		75		2
3	NR		63		54		NR		49		52		58		61		71		73		77		75		3
4	NR		63		NR		NR		49		53		58		58		71		74		76		74		4
5	NR		63				48		49		54		58		58		71		76		77		73		5
6	NR		62				48		48		54		57		58		69		77		77		73		6
7	70		60				48		48		53		56		55		67		76		77		71		7
8	68		60				48		48		53		52		55		65		77		79		71		8
9	68		60				48		48		54		52		56		65		78		79		71		9
10	69		58				47		48		54		49		60		64		76		80		71		10
11	69		56				47		47		54		49		60		66		74		79		71		11
12	69		57				47		47		54		48		63		67		73		74		71		12
13	69		57				47		47		54		48		67		66		78		75		71		13
14	70		54				47		48		51		48		65		65		76		76		71		14
15	70		51				47		48		53		48		66		64		79		80		71		15
16	72		48				47		48		53		NR		68		62		78		80		71		16
17	70		45				47		49		55				69		63		80		77		65		17
18	71		44				46		50		54				70		63		80		75		63		18
19	70		42				46		49		54				69		66		80		72		63		19
20	68		40				46		51		54				68		68		77		73		63		20
21	68		40				47		52		55				66		70		74		73		63		21
22	68		42				47		53		55				65		72		74		72		63		22
23	68		44				48		53		57				64		73		75		73		63		23
24	66		46				51		52		57				64		73		76		73		64		24
25	66		47				51		51		54				62		72		77		73		64		25
26	64		51				51		49		54				62		68		75		74		64		26
27	66		51				49		51		56				65		67		73		76		64		27
28	63		51				49		52		58				69		67		73		77		62		28
29	64		52				49		---		58				72		70		73		78		61		29
30	64		52				49		---		59		NR		73		71		73		80		61		30
31	67		---		NR		49		---		59		---		72		---		73		78		---		31
AVG.	68		53		---		48		49		55		---		64		68		75		76		68		AVG.
MAX.	---		---		---		---		---		---		---		---		---		---		---		---		MAX.
MIN.	---		---		---		---		---		---		---		---		---		---		---		---		MIN.

All figures picked from chart at HH tide.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
37 49 28	121 33 05	SE 20 1S 4E	83	July 25, 1964	43		10-18-63	Present

Station located approximately 2,000' below junction with Grant Line Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	B 9 5340	Old River @ Clifton Court Ferry

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1			60		53		49		NR		51		61		65		69		NR		74		71		1
2			61		54		49		NR		51		59		63		68		NR		72		71		2
3			60		53		49		NR		51		57		63		67		NR		72		71		3
4			60		52		49		NR		50		58		62		69		70		74		72		4
5			60		51		47		NR		53		57		60		70		70		70		72		5
6			60		50		46		NR		52		56		57		73		73		72		71		6
7			58		47		48		NR		50		58		56		71		76		72		69		7
8			57		47		48		NR		49		65		58		71		78		75		69		8
9			60		47		48		NR		49		64		59		66		76		73		68		9
10			61		48		49		NR		50		64		63		66		75		73		69		10
11			60		48		49		NR		51		65		65		68		79		72		70		11
12			59		48		47		NR		51		61		68		NR		80		73		69		12
13			60		44		48		NR		51		62		68		NR		81		70		67		13
14			60		45		47		NR		55		63		66		NR		79		71		67		14
15			61		45		47		NR		57		65		67		NR		80		72		68		15
16			62		45		43		NR		55		69		67		NR		76		72		71		16
17			59		43		45		NR		57		69		64		NR		78		75		72		17
18	67		60		43		46		51		58		65		65		NR		79		76		71		18
19	67		58		44		49		53		58		64		64		NR		78		76		71		19
20	66		56		45		50		53		58		64		63		NR		78		77		NR		20
21	68		54		46		50		53		59		68		62		NR		77		79				21
22	66		50		46		50		53		58		68		61		NR		78		79				22
23	63		48		46		51		54		54		64		63		NR		78		79				23
24	62		49		46		51		53		55		62		64		NR		80		79				24
25	63		50		47		51		53		56		60		66		NR		83		78				25
26	63		50		47		51		53		57		60		68		NR		82		77				26
27	64		50		47		52		52		58		62		66		NR		82		74				27
28	64		51		48		52		52		56		68		65		NR		82		73				28
29	64		52		48		52		52		63		68		66		NR		82		74				29
30	63		53		49		52				62		67		67		NR		78		74		NR		30
31	62				48		52				62				69		NR		74		74				31
AVG.	---		57		47		49		---		55		63		64		---		78		74		---		AVG.
MAX.	---		---		---		---		---		---		---		---		---		---		---		---		MAX.
MIN.	---		---		---		---		---		---		---		---		---		---		---		---		MIN.

All figures picked from chart at HH tide.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM		MINIMUM			PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD			FROM	TO
				DATE		DATE			
37 49 28	121 33 05	SE20 1S 4E	83	July 25, 1964	43			10-18-63	Present

Station located approximately 2,000' below junction with Grant Line Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	AO 2170	Sacramento River at Fremont Weir, West End

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																			69	69	68	67	66	65	1
2																			70	69	67	66	66	66	2
3																			70	69	67	66	66	66	3
4																			71	70	68	66	66	66	4
5																			72	71	68	67	66	66	5
6																			72	71	69	68	66	66	6
7																			71	71	69	68	66	65	7
8																			71	70	69	68	65	64	8
9																			70	70	69	68	64	64	9
10																			70	70	69	68	64	64	10
11																			70	69	68	67	64	64	11
12																			69	69	68	67	64	64	12
13																			69	68	67	66	64	64	13
14																			68	68	67	66	64	64	14
15																			68	67	67	66	65	64	15
16																			69	67	68	67	65	64	16
17																			68	67	68	67	64	62	17
18																			68	67	68	68	62	61	18
19																			68	67	68	68	61	60	19
20																			67	66	68	67	60	60	20
21																			68	67	67	66	60	60	21
22																			68	67	67	67	61	61	22
23																	71	71	68	67	67	67	62	61	23
24																	71	71	68	68	67	66	62	62	24
25																	71	71	68	68	66	66	62	62	25
26																	71	69	68	67	67	66	62	62	26
27																	69	69	67	66	67	66	62	62	27
28																	69	69	67	66	66	65	62	62	28
29																	70	69	67	66	67	66	62	62	29
30																	70	69	67	67	67	66	62	61	30
31																			67	66	67	66			31
AVG.																			69	68	68	67	64	63	AVG.
MAX. MIN.																			72 66		69 65		66 60		MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM		MINIMUM			PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD			FROM	TO
				DATE		DATE			
38 45 34	121 39 59	NW 32 1N 3E	72	July 5, 1965	60			June 23, 1965	Present
Station located 0.1 mile West of Weir, 4.0 miles South East of Knights Landing.									

TABLE D - 8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A21600	SACRAMENTO RIVER NEAR MOUNT SHASTA

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																	58	51	63	53	70	63	64	60	1
2																	61	52	64	54	70	63	65	60	2
3																	62	54	62	54	70	63	65	59	3
4																	61	53	64	54	70	62	64	58	4
5																	63	55	65	54	70	62	60	57	5
6																	62	55	65	55	70	62	61	57	6
7																	59	54	65	55	70	62	61	56	7
8																	58	54	65	56	71	61	62	56	8
9																	62	53	67	55	70	60	62	56	9
10																	64	55	65	57	68	61	62	56	10
11																	63	57	65	56	64	61	62	57	11
12																	61	55	66	55	64	61	62	56	12
13																	54	51	66	56	65	57	61	57	13
14																	55	51	67	57	64	56	62	56	14
15																	68	50	68	58	64	56	62	59	15
16																	54	51	69	59	64	58	58	57	16
17																	54	53	69	61	64	60	56	52	17
18																	60	52	68	61	61	60	56	51	18
19																	62	52	68	59	65	58	57	51	19
20																	63	54	68	60	61	59	58	52	20
21																	64	55	66	58	66	60	59	54	21
22																	64	55	67	58	66	59	60	54	22
23																	63	56	69	58	66	62	60	56	23
24																	64	56	68	58	65	61	61	56	24
25																	60	54	66	60	66	61	60	55	25
26															58	49	59	51	68	61	66	60	59	55	26
27															59	51	60	51	67	59	66	60	58	56	27
28															59	52	62	52	67	57	64	60	57	55	28
29															59	52	63	53	68	57	65	58	57	54	29
30															60	53	60	54	65	60	65	58	59	54	30
31															58	53			63	62	66	59			31
AVG.															59	52	61	53	66	57	66	60	60	56	AVG.
MAX.															60		68		69		71		65		MAX.
MIN.															49		50		53		56		51		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
71	8	8	49	5	26

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
41 16 00	122 18 38	SE33 40N 4W	71	8/8/65	41	5/26/65	5/65	Date
Station located 1.5 mi. SW of junction of State Highway 89 and U. S. Highway 99, 3mi. S. of Mount Shasta.								

TABLE D-8

**WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)**

WATER YEAR	STATION NO.	STATION NAME
1965	A O 2105	SACRAMENTO RIVER AT SACRAMENTO WEIR

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1					50	50	44	43	47	47	49	49	53	53	61	60	65	64	71	68	70	68	68	67	1
2					50	50	44	43	47	47	49	49	53	53	61	60	64	64	73	70	70	68	68	67	2
3					50	50	44	43	47	47	49	49	53	53	60	59	64	64	74	71	70	68	69	67	3
4					50	50	44	43	47	47	50	50	53	53	59	58	64	64	75	72	70	68	68	66	4
5					50	50	45	43	47	47	51	50	53	53	58	57	65	64	76	73	71	69	67	66	5
6					50	49	46	45	47	47	51	51	53	53	57	57	65	65	75	73	72	70	66	64	6
7					49	49	46	45	47	47	51	51	53	52	57	56	66	65	74	71	73	71	66	65	7
8					49	48	45	44	47	47	52	51	52	52	56	56	66	66	74	71	73	71	66	64	8
9					48	48	44	44	47	46	53	52	52	51	57	56	66	66	74	72	72	71	66	64	9
10					49	48	44	44	46	46	53	53	51	50	58	57	66	65	72	70	72	71	67	65	10
11					50	49	45	44	46	46	53	53	50	49	59	58	67	66	71	69	70	68	67	65	11
12					50	50	45	45	46	45	53	53	50	49	60	59	68	67	72	69	70	68	66	65	12
13					50	49	46	45	45	45	53	53	51	50	60	60	69	68	72	70	71	69	66	65	13
14			52	52	49	48	46	46	45	45	53	53	51	51	60	60	69	69	72	70	71	70	66	65	14
15			52	51	48	48	47	46	45	45	53	53	52	51	61	60	69	69	73	70	70	69	67	65	15
16			51	48	48	47	47	47	46	45	53	53	52	52	62	61	69	69	74	72	71	69	66	65	16
17			48	48	47	46	47	47	46	46	53	53	52	51	63	62	69	68	73	72	71	70	64	62	17
18			48	47	46	46	47	47	47	46	53	53	51	51	63	63	69	68	72	71	71	70	63	62	18
19			47	46	46	46	47	47	47	47	53	53	52	51	63	63	71	68	72	70	71	70	62	61	19
20			46	46	47	46	47	47	47	47	54	53	52	52	63	62	72	70	71	69	71	70	62	60	20
21			46	46	48	47	47	47	48	47	54	54	54	52	62	61	72	70	70	68	70	69	62	61	21
22			47	46	48	48	47	47	48	48	54	54	55	54	61	61	72	70	71	69	70	68	62	61	22
23			47	47	51	48	47	47	48	48	54	53	56	55	62	61	70	69	71	69	70	68	64	62	23
24			48	47	52	51	47	47	48	48	53	53	57	56	62	61	70	68	72	70	69	68	65	63	24
25			49	48	51	50	47	47	48	48	53	53	58	57	61	61	69	68	70	69	68	67	65	63	25
26			50	49	50	50	47	46	48	48	53	53	59	58	61	61	70	67	69	68	69	67	64	63	26
27			50	50	50	49	46	46	48	48	53	53	60	59	62	61	70	67	69	67	70	69	63	62	27
28			50	50	49	47	46	46	49	48	53	53	60	60	63	62	71	68	69	67	70	69	62	61	28
29			50	50	47	45	46	46	49	49	53	52	60	60	65	63	72	70	69	67	69	68	62	60	29
30			50	50	45	44	47	46			52	52	60	60	65	65	71	68	69	68	70	68	62	60	30
31					44	44	47	47			53	52			65	65			70	68	69	68			31
AVG.					49	48	46	45	47	47	52	52	54	53	61	60	68	67	72	70	70	69	65	64	AVG.
MAX. MIN.					52 44		47 43		49 45		54 49		60 49		65 56		72 64		76 67		72 67		69 60		MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76	July	5	43	Jan.	1

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
			DATE		DATE			
38 36 09	121 33 12	NE 29 9N 4E	76	July 5, 1965	43	Jan. 3, 1965	Nov. 14, 1964	Present
Station located 100' below weir, 4 miles North West of Sacramento.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	B 9 1700	Sacramento River At Walnut Grove

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1									50	47	51	50	62	60	63	61	76	74	74	71	73	71	70	69	1
2									50	48	50	50	61	60	64	62	78	73	74	71	72	71	69	69	2
3									50	49	50	49	59	59	64	62	78	73	74	71	72	70	69	68	3
4									50	49	50	49	59	58	63	61	78	73	74	70	72	70	69	68	4
5									50	48	50	49	59	58	62	61	78	74	72	70	72	70	69	69	5
6									50	48	51	50	58	57	62	60	79	74	72	70	73	71	69	69	6
7									50	47	52	51	58	57	61	60	79	74	72	70	73	71	69	69	7
8									50	47	52	51	58	57	61	60	79	68	74	71	73	71	69	69	8
9									50	47	52	51	58	56	62	60	71	68	74	71	73	71	69	68	9
10									49	46	52	51	59	57	64	61	70	67	74	71	72	70	69	68	10
11									49	47	52	52	60	58	67	63	66	67	76	72	72	70	70	69	11
12									49	47	53	53	61	60	69	65	68	66	77	73	72	70	71	70	12
13									49	47	53	53	60	59	71	67	69	67	78	73	72	71	70	69	13
14									49	46	53	53	61	59	72	67	72	68	77	73	73	70	70	69	14
15							48	44	49	46	53	53	62	59	72	67	73	68	77	73	73	70	70	69	15
16							50	44	49	46	53	53	63	61	71	68	73	69	78	73	72	70	71	70	16
17							49	45	49	47	54	53	64	62	70	67	73	69	79	73	72	70	71	70	17
18							49	45	49	47	55	54	64	61	70	67	74	69	78	73	72	70	71	70	18
19							49	45	49	48	55	54	63	61	70	68	72	68	76	73	72	71	71	70	19
20							49	46	50	49	56	55	63	61	70	67	73	69	75	71	73	71	71	70	20
21							49	47	50	49	56	56	63	61	70	67	73	69	74	71	74	72	70	70	21
22							50	46	51	50	56	56	63	61	71	68	74	70	73	70	74	72	70	69	22
23							50	46	51	50	56	56	63	61	72	68	75	70	73	70	74	72	69	68	23
24							49	46	51	50	56	56	62	60	72	68	77	71	73	70	74	72	68	67	24
25							49	45	51	50	56	55	62	60	72	68	78	72	73	68	74	72	69	67	25
26							49	46	51	50	56	56	62	60	75	71	79	72	72	69	73	71	68	68	26
27							49	45	51	50	56	56	62	60	74	71	78	72	72	70	73	71	68	68	27
28							49	46	51	50	56	56	62	61	74	70	77	72	73	70	72	71	69	68	28
29							49	46	51	50	57	56	63	61	74	71	76	72	73	71	72	71	69	68	29
30							49	47	---	---	58	57	63	61	75	71	75	71	73	71	72	70	68	68	30
31							49	47	---	---	---	---	---	---	76	71	---	---	74	71	72	70	---	---	31
AVG.									50	48	54	53	61	60	69	66	75	70	74	71	73	71	70	69	AVG.
MAX. MIN.							50 44		51 46		58 49		64 56		76 60		79 66		79 68		74 70		71 67		MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
79	June	6	44	Jan.	15

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
38 14 22	121 30 57	SW35 5N 4E	79		44		1-15-64	Present
Station located at head of Georgiana Slough, immediately S.W. of Walnut Grove.								

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 1700	Sacramento River at Walnut Grove

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	68	67	60	60	54	51	51	51	48	47	53	52	56	56	60	58	69	65	74	69	73	71	72	72	1
2	68	67	60	59	54	52	50	50	48	47	54	52	56	56	60	58	68	65	75	70	73	71	71	71	2
3	68	68	60	58	55	53	50	50	48	47	54	52	56	56	59	58	68	65	75	70	73	71	71	70	3
4	68	68	59	57	56	52	50	49	48	47	54	53	56	56	59	58	68	65	76	70	73	71	71	70	4
5	69	68	58	56	55	52	49	48	48	46	54	53	56	56	58	58	69	65	77	70	73	71	70	69	5
6	69	68	58	57	55	50	48	47	NR	NR	53	52	56	56	58	58	69	65	77	71	74	71	69	69	6
7	69	68	58	57	54	50	48	47	NR	NR	53	52	55	55	58	58	68	65	77	71	74	71	69	69	7
8	69	68	59	57	54	50	47	47	NR	NR	52	52	55	54	58	58	68	65	77	71	74	71	69	68	8
9	68	67	59	57	54	50	47	47	48	46	52	52	54	53	58	58	68	65	75	70	74	71	69	68	9
10	68	67	59	57	54	50	47	47	48	45	53	52	54	53	59	59	68	65	75	70	74	72	69	68	10
11	68	67	59	57	54	50	47	47	48	45	53	53	54	53	61	59	69	66	74	70	74	72	68	68	11
12	68	67	58	55	54	51	48	47	49	44	53	53	53	52	62	60	70	66	74	70	72	71	68	68	12
13	68	67	58	55	54	51	48	47	48	43	53	53	53	52	62	61	70	66	74	71	72	71	68	68	13
14	67	67	58	53	53	49	48	47	48	43	53	53	53	52	62	61	70	66	74	70	73	72	69	68	14
15	67	67	57	52	52	48	48	47	48	44	54	54	54	53	62	61	70	66	74	70	73	72	69	68	15
16	66	66	58	48	52	47	48	47	48	44	54	54	54	53	63	61	71	66	76	71	73	72	69	69	16
17	66	66	56	46	52	46	48	46	48	45	54	54	55	53	64	62	71	67	75	71	74	72	69	68	17
18	66	65	56	44	51	44	47	46	49	46	54	54	54	54	64	62	71	66	75	71	74	71	68	67	18
19	65	65	53	44	50	43	47	46	49	47	55	55	54	52	64	62	70	66	75	71	74	71	68	67	19
20	65	65	54	44	50	44	47	46	49	47	56	55	53	53	63	62	71	66	74	71	74	72	68	66	20
21	65	65	53	44	50	45	47	47	50	49	57	56	53	53	63	62	72	66	74	70	74	72	65	65	21
22	65	64	52	45	49	47	48	47	50	49	58	57	53	53	63	62	72	66	74	70	73	72	65	65	22
23	64	64	52	45	50	49	48	47	51	50	58	57	53	53	63	62	72	67	75	71	73	72	65	65	23
24	65	63	53	47	51	50	48	46	52	51	57	57	53	53	64	62	72	67	74	71	72	71	65	65	24
25	63	63	53	48	51	51	48	48	52	50	57	57	53	53	64	62	71	66	74	70	71	70	65	65	25
26	64	62	53	48	51	51	48	48	52	50	57	57	54	53	64	62	70	66	73	70	72	70	65	65	26
27	62	62	54	49	51	51	48	48	52	51	57	57	56	53	65	63	71	66	72	70	72	71	64	64	27
28	62	61	54	51	51	51	48	48	53	52	57	57	56	56	66	63	71	67	72	70	73	71	64	64	28
29	62	61	54	51	51	51	48	47	---	---	56	56	59	57	68	65	73	68	72	70	73	71	64	64	29
30	61	61	54	51	51	51	48	48	---	---	56	56	60	57	70	66	74	70	72	70	73	71	64	64	30
31	61	60	---	---	51	51	48	47	---	---	56	56	---	---	71	66	---	---	73	71	72	71	---	---	31
AVG.	66	65	56	52	52	49	48	47	49	47	55	54	55	54	62	61	70	66	74	70	73	71	68	67	AVG.
MAX. MIN.	69	60	60	44	56	43	51	46	53	43	58	52	60	52	71	58	74	65	77	69	74	70	72	64	MAX. MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77	July	5	43	Feb.	13

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
38 14 22	121 30 57	SW35 5N 4E	79		44		1-15-64	Present

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
 (IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 5620	San Joaquin River at Rindge Pump

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1									46	46	61	59	62	59	73	70	72	70	79	74	79	77	78	76	1
2									47	47	61	53	61	60	70	67	73	71	79	76	80	76	80	75	2
3									47	46	57	54	63	60	71	65	74	71	80	76	81	77	80	76	3
4									47	46	58	55	65	60	66	64	74	72	80	77	79	78	79	75	4
5									48	47	58	56	62	60	66	62	75	71	81	78	83	79	78	75	5
6									49	48	57	56	60	59	62	59	75	72	80	78	84	79	76	74	6
7							50	50	49	48	57	55	59	57	62	58	73	71	82	78	83	79	77	73	7
8							50	49	50	49	57	56	56	55	64	59	72	69	81	78	83	78	76	74	8
9							49	47	50	49	57	56	54	51	65	61	72	69	81	78	83	79	77	73	9
10							47	46	50	47	56	55	49	50	66	61	71	69	82	77	83	79	77	73	10
11							47	46	48	47	55	54	50	49	68	63	70	69	81	77	81	78	78	74	11
12							46	46	48	47	54	50	50	49	69	65	71	68	82	78	81	77	77	74	12
13							46	46	48	47	52	50	50	49	71	67	69	66	82	78	82	77	77	74	13
14							47	47	49	48	53	51	51	49	73	67	69	67	82	78	84	79	76	74	14
15							47	47	50	49	53	50	52	50	79	68	68	66	82	78	81	78	77	72	15
16							47	47	53	50	53	53	56	52	78	69	67	65	83	80	82	78	74	69	16
17							47	46	57	51	54	51	56	54	81	69	67	66	83	80	81	78	70	63	17
18							46	46	59	52	56	52	57	55	82	70	68	64	82	80	81	77	66	60	18
19							47	47	61	53	57	53	62	56	73	71	71	66	81	79	81	77	65	62	19
20							48	47	60	54	58	54	59	58	73	70	72	68	81	78	80	77	66	64	20
21							47	47	60	57	59	57	64	59	71	69	71	68	82	77	80	76	68	64	21
22							49	47	59	58	60	59	64	60	72	70	72	69	82	78	79	75	70	65	22
23							50	49	59	56	60	58	67	61	72	68	73	69	81	77	78	74	69	67	23
24							51	51	59	57	59	57	68	62	70	66	75	70	79	77	77	74	69	67	24
25							51	50	59	57	59	56	69	64	73	67	71	69	78	76	77	74	69	67	25
26							50	48	61	59	58	56	71	66	72	68	73	68	79	75	78	75	69	67	26
27							49	48	60	59	58	57	71	68	72	69	75	70	78	74	80	77	68	67	27
28							48	47	59	59	61	57	71	69	72	69	76	72	79	74	80	77	68	65	28
29							47	46	---	---	58	57	74	70	72	67	76	72	79	74	81	78	68	65	29
30							47	46	---	---	58	57	76	71	73	70	79	74	79	75	80	78	71	65	30
31							46	46	---	---	60	58	---	---	72	71	---	---	79	75	79	77	---	---	31
AVG.							48	47	53	51	57	55	61	58	71	66	72	69	81	77	81	77	73	70	AVG.
MAX. MIN.							51 46		61 46		61 50		76 49		82 58		79 64		83 74		84 74		80 60		MAX. MIN.

Probe not long enough on LL tide, becomes exposed to air.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
84	Aug.	6,14	46		

LOCATION			MAXIMUM		MINIMUM		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.	TEMPERATURE OF RECORD		TEMPERATURE OF RECORD		FROM	TO
				DATE		DATE		
37 59 51	121 25 06	NW 27 2N 5E	84	8-6,14,-65	46		1-7-65	Present

Station located on Rindge Tract at Fourteen mile Slough near junction with Stockton Ship Channel, 8 mi. N.W. of Stockton.

APPENDIX E
GROUND WATER QUALITY

ACKNOWLEDGMENTS

The coverage of the Ground Water Quality Data Program in northeastern California is made possible through the cooperation of local agencies. The Department wishes to express its appreciation for the valuable assistance and cooperation received from the following county agencies:

Butte County Farm Advisor
Colusa County Farm Advisor
Glenn County Farm Advisor
Placer County Health Department
Sacramento County Farm Advisor
Shasta County Department of Water Resources
Sutter County Farm Advisor
Tehama County Farm Advisor
Yolo County Farm Advisor
Yuba County Farm Advisor

APPENDIX E: INTRODUCTION

The data presented in this appendix are measured values of selected quality characteristics that demonstrate the dissolved mineral and physical conditions of ground waters in northeastern California as shown on the "Area Orientation Map", which area lies within the jurisdictions of the Central Valley (No. 5) and Lahontan (No. 6) Regional Water Quality Control Boards. The data in this bulletin were collected during the 1964-65 water year, from October 1, 1964 through September 30, 1965.

Figure E-1, Ground Water Basins in Northeastern California, shows the location and index numbers of the areas where samples were collected. The Index of Monitored Areas provides a tabulation of the basins according to the assigned basin index number.

Tabulated values are expressed in milligrams per liter which is equivalent to parts per million. Equivalents per liter are tabulated, and where applicable, the percent reactance values. The computations and tabulation are by computer processes.

Field sampling was performed in accordance with accepted engineering practice. Comments on local conditions were noted in field books, which are on file in the Department's District office.

Laboratory analysis of ground water samples was performed in the Department's chemical laboratory at Bryte and by contract with the U. S. Geological Survey laboratory in Sacramento, in accordance with procedures outlined in "Standard Methods for the Examination of Water and Waste Water", Eleventh Edition.

The data were collated, reviewed to note trends or significant changes, and published.

Specific Conductance and pH were determined in the laboratory.

Mineral Constituents were determined in the laboratory in accordance with American Public Health Association, "Standard Methods", Eleventh Edition. Tabulated values are analytical quantities reported in milligrams per liter (mg/l), which is equivalent to parts per million, computed values for milliequivalents (meq), and percent reactance values. The computations and tabulation are by computer processes.

Total Dissolved Solids. In some cases two values are reported. The upper number represents a summation of constituents; the lower is the result of a gravimetric analysis.

Total Hardness is assumed to represent the sum of the concentrations of calcium and magnesium ions, expressed as calcium carbonate, and is computed from the values for calcium and magnesium concentrations.

CODING

State Well Number

The state well numbering system used in this report is based on township, range, and section subdivision of the Public Land Survey. It is the system used in all ground water investigations and for numbering all wells for which data are published or filed by the Department of Water Resources. In this report the number of a well is referred to as the State Well Number. Under the system, each section is divided into 40-acre tracts lettered as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Other Codes

Time. The time of sampling is Pacific Standard Time and expressed in military style.

Agency Codes. Agency coding is applicable for both the collecting and the laboratory agency. Only the laboratory agency is given in this tabulation. The numeral 5000 indicates the U. S. Geological Survey laboratory in Sacramento and the numeral 5050 indicates the Department of Water Resources' laboratory at Bryte.

Basin Index. The Basin Index numbers are listed under Index of Monitored Areas.

INDEX OF MONITORED AREAS

CENTRAL VALLEY REGION (NO. 5)

<u>Number</u>	<u>Basin</u>	<u>Page</u>
5- 1.00	Goose Lake Valley	153
5- 2.00	Alturas Basin	154
5- 4.00	Big Valley	155
5- 5.00	Fall River Valley	155
5- 6.00	Redding Basin	156
5- 7.00	Lake Almanor Valley	158
5- 9.00	Indian Valley	159
5-10.00	American Valley	159
5-11.00	Mohawk Valley	160
5-12.00	Sierra Valley	160
5-13.00	Upper Lake Valley	161
5-15.00	Kelseyville Valley	162
5-16.00	High Valley	163
5-17.00	Burns Valley	163
5-18.00	Coyote Valley	164
5-21.00	Sacramento Valley	164
5-21.01	Tehama County	164
5-21.02	Glenn County	166
5-21.03	Butte County	168
5-21.04	Colusa County	169
5-21.05	Sutter County	171
5-21.06	Yuba County	173
5-21.07	Placer County	174
5-21.08	Sacramento County	175
5-21.09	Yolo County	177
5-22.00	San Joaquin Valley	180
5-22.01	San Joaquin County	180

LAHONTAN REGION (NO. 6)

6- 1.00	Surprise Valley	183
6- 4.00	Honey Lake Valley	185
6- 5.01	South Tahoe Valley	187
6- 5.02	North Tahoe Valley	187
6- 6.00	Carson Valley	188
6- 7.00	Topaz Valley	188
6- 8.00	Bridgeport Valley	188
6-67.00	Truckee Valley	189

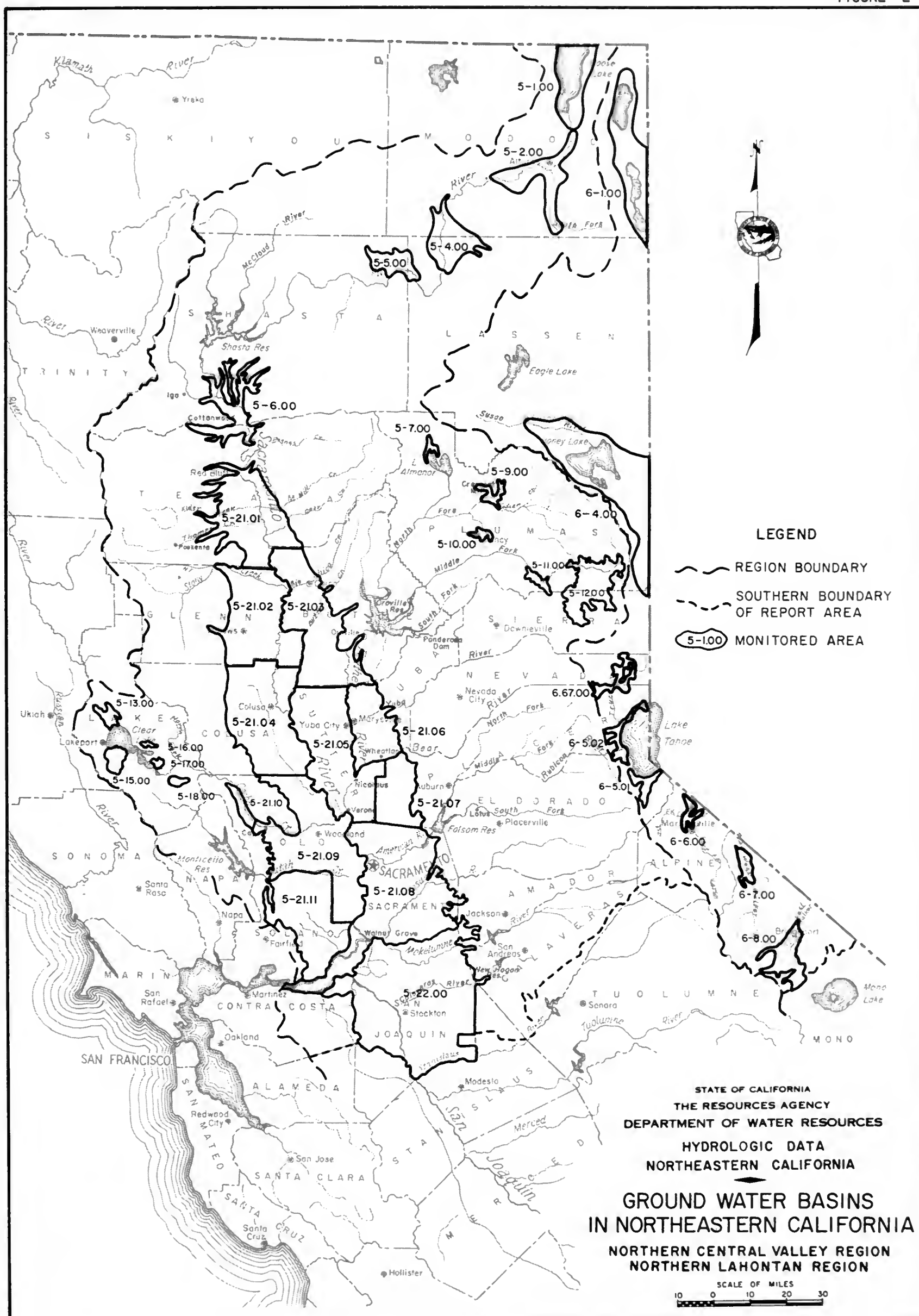


TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER					
				MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE					MILLIEQUIVALENT PER LITER					F	B	SI02	TDS SUM	TH NCH	
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3							
GOOSE LAKE VALLEY								CENTRAL VALLEY REGION				50000							
48N/13E-20G01 M 08/12/65 5050	--	--	600	--	--	17 .74	--	--	--	--	--	5.9 .17	22 .35	--	--	--	--	285	
48N/14E-23K01 M 08/12/65 5050	58.0F	--	235	--	--	16 .70	--	--	--	--	--	1.9 .05	17 .27	--	--	--	--	88	
48N/14E-35A01 M 08/11/65 5050	--	--	167	--	--	8.4 .37	--	--	--	--	--	0.4 .01	7.4 .12	--	--	--	--	69	
48N/14E-35A02 M 08/12/65 5050	69.0F	--	714	--	--	150 6.53	--	--	--	--	--	92 2.59	--	4.0	4.3	--	--	14	
47N/14E-02H01 M 08/12/65 5050	--	--	451	--	--	98 4.26	--	--	--	--	--	46 1.30	--	3.6	2.5	--	--	4	
47N/14E-14B02 M 08/12/65 5050	--	--	151	--	--	6.8 .30	--	--	--	--	--	--	--	--	--	--	--	64	
46N/14E-32J01 M 08/12/65 5050	--	--	100	--	--	6.5 .28	--	--	--	--	--	--	--	--	--	--	--	37	
45N/13E-12L01 M 08/12/65 5050	--	--	310	--	--	54 2.35	--	--	--	--	--	--	--	--	--	--	--	46	
45N/14E-32L01 M 08/12/65 5050	--	--	235	--	--	13 .57	--	--	--	--	--	--	--	--	--	--	--	95	
44N/13E-36A01 M 08/12/65 5050	--	--	165	--	--	25 1.09	--	--	--	--	--	--	--	--	--	--	--	41	
44N/14E-C7K01 M 08/12/65 5050	--	--	822	--	--	39 1.70	--	--	--	--	--	--	--	--	--	--	--	267	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER								MILLIGRAMS PER LITER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER						MILLIGRAMS PER LITER													
						PERCENT REACTANCE VALUE										PERCENT REACTANCE VALUE																			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH																
BIG VALLEY																																			
39N/07E-13C01 M 08/25/65 5050 0915			--	--	213		--	32 1.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	37							
39N/07E-14R01 M 08/25/65 5050 0920			--	8.5	2920		156 7.78 34	104 8.55 38	144 6.26 28	2.1 .05	16 .53 2	486 7.97 35	123 2.56 11	257 7.25 32	272 4.38 19	--	--	--	--	--	--	--	--	--	1380 1312	815 390									
39N/08E-26J01 M 08/25/65 5050 0815			58.0F	--	1080		92 4.59	35 2.93	64 2.78	--	--	--	72 1.50	56 1.58	239 3.85	--	--	--	--	--	--	--	--	--	--	--	376								
39N/09E-28F20 M 08/24/65 5050 1520			--	--	194		--	--	18 .78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54								
38N/C7E-02P01 M 08/25/65 5050 1000			--	--	511		--	--	44 1.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	151								
38N/C7E-23C01 M 08/25/65 5050 1010			--	--	273		--	--	25 1.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	80								
38N/C8E-17K01 M 08/24/65 5050 1500			--	--	218		--	--	14 .61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	79								
38N/C9E-21L01 M 08/24/65 5050 1515			--	--	332		--	--	52 2.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	56								
37N/C7E-13B01 M 08/24/65 5050 1420			--	--	241		--	--	20 .87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70								
FALL RIVER VALLEY																																			
38N/C3E-24F01 M 08/23/65 5050 1510			--	--	148		--	--	4.1 .18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	66								
38N/C4E-27Q01 M 08/23/65 5050 1520			56.5F	8.2	167		12 .60 34	5.4 .44 25	15 .65 37	2.9 .07 4	0.0 .00	97 1.59 88	1.3 .03 2	6.0 .17 9	0.6 .01 1	--	--	--	--	--	--	--	--	--	132 91	52 0									

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
38N/C4E-30F01 M 08/23/65 5050 1445	--	--	221	--	--	12 .52	--	--	--	--	--	--	--	--	--	--	82		
38N/C6E-31D01 M 08/24/65 5050 1040	60.0F	8.3	199	14 .70 36	9.0 .74 38	9.8 .43 22	2.4 .06 3	0.0 .00	108 1.77 95	0.2 .00	2.4 .07 4	1.5 .02 1	--	.0	--	144 92	72 0		
37N/C4E-01K01 M 08/23/65 5050 1615	--	--	907	--	--	94 4.09	--	--	--	--	0.0 .00	0.6 .01	--	--	--	--	261		
37N/C5E-14R01 M 08/24/65 5050 0815	--	--	188	--	--	40 1.74	--	--	--	--	--	--	--	--	--	--	5		
37N/C5E-19P02 M 08/24/65 5050 0715	64.0F	--	500	--	--	54 2.35	--	--	--	--	--	--	--	--	--	--	120		
37N/C5E-24FC1 M 08/24/65 5050 0900	58.0F	--	198	--	--	20 .87	--	--	--	--	--	--	--	--	--	--	53		
37N/C6E-19L01 M 08/24/65 5050 0930	--	--	194	--	--	10 .44	--	--	--	--	1.4 .04	14 .23	--	--	--	--	74		
37N/C6E-25B01 M 08/24/65 5050 0935	--	--	584	--	--	16 .70	--	--	--	--	18 .51	155 2.50	--	--	--	--	257		
REDDING BASIN				50600															
32N/C5W-26M01 M 08/23/65 5050 1400	66.0F	--	274	--	--	24 1.04	--	--	--	--	7.8 .22	--	--	--	--	--	83		
32N/C4W-14F02 M 08/23/65 5050 1235	63.0F	--	183	--	--	15 .65	--	--	--	--	7.6 .21	--	--	--	--	--	54		
32N/C4W-16B02 M 08/23/65 5050 1300	74.0F	--	132	6.8 .34	3.6 .30	11 .48	--	--	--	--	--	--	--	--	--	--	32		
32N/C4W-34FC1 M 08/23/65 5050 1320	72.0F	--	318	--	--	38 1.65	--	--	--	--	--	--	--	--	--	--	72		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH			
32N/C3W-17E02 M 08/23/65 5050 1222			72.0F	--	3450	--	--	682 29.67	--	--	--	--	--	908 25.61	--	--	13.0	--	1770	104		
32N/C3W-20P01 M 08/23/65 5050 1215			70.0F	--	213	16 .80	7.3 .60	14 .61	--	--	--	--	--	--	--	--	--	--	--	70		
32N/C3W-32J02 M 08/23/65 5050 1200			70.0F	--	347	24 1.20	12 1.00	28 1.22	--	--	--	--	--	--	--	--	--	--	--	110		
32N/C3W-35C01 M 08/23/65 5050 1140			68.0F	--	215	--	--	18 .78	--	--	--	--	--	--	--	--	--	--	--	70		
31N/C5W-13C01 M 08/23/65 5050 0805			72.0F	--	427	--	--	59 2.57	--	--	--	--	--	--	--	--	.3	--	--	69		
31N/C4W-07A01 M 08/23/65 5050 1400			76.0F	--	215	17 .85	9.1 .75	15 .65	--	--	--	--	--	--	--	--	--	--	--	80		
31N/C4W-15B01 M 08/23/65 5050 1330			70.0F	--	220	12 .60	9.9 .82	18 .78	--	--	--	--	--	--	--	--	--	--	--	71		
31N/C4W-16C01 M 08/23/65 5050 1345			65.0F	--	176	10 .50	9.7 .80	12 .52	--	--	--	--	--	--	--	--	--	--	--	65		
31N/C3W-12E01 M 08/23/65 5050 1125			71.0F	--	196	18 .90	7.8 .64	--	--	--	--	--	--	--	--	--	--	--	--	77		
31N/C3W-29P01 M 08/23/65 5050 1045			66.0F	--	220	16 .80	11 .92	9.8 .43	--	--	--	--	--	--	--	--	--	--	--	86		
30N/C5W-15R01 M 08/23/65 5050 0835			78.0F	--	187	11 .55	6.9 .57	16 .70	--	--	--	--	--	--	--	--	--	--	--	56		
30N/C5W-17H01 M 08/23/65 5050 0850			68.0F	--	147	--	--	15 .65	--	--	--	--	--	--	--	--	--	--	--	37		
31N/C5W-25K01 M 08/24/65 5050 0800			--	--	244	--	--	38 1.65	--	--	--	--	--	--	--	--	--	--	--	35		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER							
				PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER							
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH
30N/04W-C1E01 M 08/23/65 S050 1030	68.0F	--	68	3.2 .16	1.9 .16	5.7 .25	--	--	--	--	--	--	--	--	--	--	16
30N/04W-16J01 M 08/23/65 S050 0920	72.0F	--	242	17 .85	13 1.07	12 .52	--	--	--	--	--	--	--	--	--	--	96
30N/03W-C4M01 M 08/23/65 S050 1000	68.0F	--	191	13 .65	11 .93	8.8 .38	--	--	--	--	--	--	--	--	--	--	79
30N/03W-34D01 M 08/23/65 S050 0945	74.0F	--	273	22 1.10	15 1.26	9.9 .43	--	--	--	--	--	--	--	--	--	--	118
29N/04W-02M01 M 08/23/65 S050 0930	78.0F	--	196	16 .80	6.0 .50	16 .70	--	--	--	--	--	--	--	--	--	--	65
LAKE ALMANOR VALLEY				50700													
28N/07E-05L01 M 08/09/65 S050	--	7.5	81	--	--	4.4 .19	--	0.0 .00	43 .71	--	1.4 .04	--	--	--	--	74	27 0
28N/07E-C5N01 M 08/09/65 S050	--	8.1	92	--	--	5.1 .22	--	0.0 .00	52 .85	--	1.6 .05	--	--	--	--	80	33 0
28N/07E-C7A01 M 08/09/65 S050	--	7.9	111	--	--	7.4 .32	--	0.0 .00	66 1.08	--	1.4 .04	--	--	--	--	80	41 0
28N/07E-C7F01 M 08/09/65 S050	--	8.2	122	--	--	4.7 .20	--	0.0 .00	72 1.18	--	1.4 .04	--	--	--	--	88	49 0
28N/07E-18B01 M 08/09/65 S050	--	8.4	192	--	--	3.8 .17	--	2.5 .08	114 1.87	--	0.5 .01	--	--	--	--	123	91 0
28N/07E-18D01 M 08/09/65 S050	--	7.6	67	--	--	2.8 .12	--	0.0 .00	40 .66	--	0.8 .02	--	--	--	--	56	25 0
28N/07F-18M01 M 08/09/65 S050	--	8.6	232	--	--	9.3 .40	--	6.0 .20	135 2.21	--	1.7 .05	--	--	--	--	143	109 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER								
				PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER								
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
INDIAN VALLEY																		
27N/C9F-35P01 M 08/10/65 5050	--	8.4	235	50900	--	--	8.5 .37	--	--	3.0 .10	142 2.33	--	--	0.8 .02	--	--	144	106 0
26N/10E-C4E01 M 08/10/65 5050	--	8.3	183	--	--	--	21 .91	--	--	0.0 .00	114 1.87 1	--	--	0.7 .02	--	--	126	53 0
26N/10E-06E01 M 08/10/65 5050	--	8.4	525	--	--	--	60 2.61	--	--	2.0 .07	109 1.79	--	--	89 2.51	--	--	288	101 8
26N/10E-16P01 M 08/10/65 5050	--	8.6	510	--	--	--	47 2.04	--	--	10 .33	193 3.17	--	--	34 .96	--	--	294	154 0
26N/10E-18M01 M 08/10/65 5050	--	8.4	233	--	--	--	8.2 .36	--	--	4.0 .13	138 2.26	--	--	0.0 .00	--	--	159	105 0
26N/10E-23H01 M 08/10/65 5050	--	7.8	203	--	--	--	4.6 .20	--	--	0.0 .00	115 1.89	--	--	0.3 .01	--	--	111	92 0
26N/10E-27H01 M 08/10/65 5050	--	8.0	99	--	--	--	4.8 .21	--	--	0.0 .00	53 .87	--	--	0.0 .00	--	--	71	35 0
AMERICAN VALLEY																		
24N/C9F-C2A01 M 08/10/65 5050	--	8.4	298	51000	--	--	7.0 .30	--	--	4.0 .13	179 2.94	--	--	0.2 .01	--	--	162	146 0
24N/05E-10H01 M 08/10/65 5050	--	8.1	146	--	--	--	2.0 .09	--	--	0.0 .00	86 1.41	--	--	0.0 .00	--	--	85	69 0
24N/C5E-16H01 M 08/10/65 5050	--	7.6	58	--	--	--	2.0 .09	--	--	0.0 .00	31 .51	--	--	0.0 .00	--	--	45	23 0
24N/10F-C6A01 M 08/10/65 5050	--	8.3	381	--	--	--	24 1.04	--	--	0.0 .00	230 3.77	--	--	4.3 .12	--	--	212	146 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH			
24N/10E-08L01 M 08/10/65 5050	--	6.9	264	--	--	7.6 .33	--	0.0 .00	151 2.48	--	0.3 .01	--	--	157	121 0					
24N/10E-18D01 M 08/10/65 5050	--	7.6	105	--	--	2.7 .12	--	0.0 .00	53 .87	--	0.6 .02	--	--	69	45 2					
24N/10E-19B01 M 08/10/65 5050	--	7.5	95	--	--	1.5 .07	--	0.0 .00	50 .82	--	0.1 .00	--	--	60	44 3					
24N/10E-19D01 M 08/10/65 5050	--	8.1	127	--	--	3.2 .14	--	0.0 .00	71 1.16	--	0.0 .00	--	--	80	57 0					
24N/10E-20D01 M 08/10/65 5050	--	7.2	46	--	--	2.0 .09	--	0.0 .00	22 .36	--	0.0 .00	--	--	36	17 0					
MOHAWK VALLEY				51100																
22N/12E-09A01 M 08/18/65 5050	--	8.3	154	--	--	5.2 .23	--	0.0 .00	95 1.56 1	--	0.0 .00	--	--	123	65 0					
22N/12E-09D01 M 08/18/65 5050	--	7.0	276	--	--	14 .61	--	0.0 .00	115 1.89	--	0.0 .00	--	--	207	101 7					
22N/13E-19N01 M 08/15/65 5050	--	8.2	244	--	--	18 .78	--	0.0 .00	141 2.31	--	0.7 .02	--	--	163	84 0					
22N/13E-30R01 M 08/18/65 5050	--	7.0	391	--	--	44 1.91	--	0.0 .00	107 1.75	--	19 .54	--	--	264	78 0					
SIERRA VALLEY				51200																
22N/14E-14F02 M 08/18/65 5050	--	8.2	158	14 .70 42	7.0 .58 35	7.8 .34 20	1.4 .04 2	0.0 .00	96 1.57 96	3.3 .07 4	0.0 .00	0.3 .00	--	118 81	64 0					
22N/15E-11F01 M 08/18/65 5050	--	7.9	352	40 2.00 65	8.8 .72 24	7.7 .33 11	0.2 .01	0.0 .00	61 1.00 36	9.2 .19 7	22 .62 23	58 .93 34	--	276 176	136 86					

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3		F	B	SI02	TDS SUM	TH NCH
22N/15E-12801 M 08/18/65 5050	--	7.0	220	3.6 .18 11	3.9 .32 19	24 1.04 62	5.4 .14 8	0.0 .00 .	67 1.10 63	3.4 .07 4	1.4 .04 2	33 .53 30	--	--	.0	--	176 108 0	25 0
22N/15E-17C03 M 08/18/65 5050	--	8.1	367	3.4 .17 5	1.1 .09 3	70 3.05 91	2.3 .06 2	0.0 .00 .	135 2.21 66	3.6 .07 2	24 .68 20	24 .39 12	--	--	.9	--	282 195 0	13 0
22N/15E-26K02 M 08/18/65 5050	--	8.5	2220	56 2.79 12	79 6.49 28	325 14.14 60	6.2 .16 1	20 .67 3	546 8.95 38	383 7.97 34	213 6.01 25	8.5 .14 1	--	--	.1	--	1390 1358 0	466 0
22N/16E-05N02 M 08/18/65 5050	--	8.2	172	26 1.30 71	0.2 .02 1	9.8 .43 24	2.7 .07 4	0.0 .00 .	97 1.59 84	8.7 .18 10	2.8 .08 4	2.3 .04 2	--	--	.0	--	119 100 0	66 0
21N/14E-15J01 M 08/18/65 5050	--	8.1	463	7.5 .37 9	7.9 .65 16	68 2.96 72	4.4 .11 3	0.0 .00 .	130 2.13 54	0.0 .00 .	51 1.44 37	22 .35 9	--	--	.1	--	314 225 0	51 0
21N/14E-22L01 M 08/18/65 5050	--	8.5	618	28 1.40 24	0.5 .04 1	93 4.05 71	9.0 .23 4	4.0 .13 2	139 2.28 41	7.9 .16 3	102 2.88 52	4.8 .08 1	--	--	.9	--	344 318 0	72 0
21N/14E-29J01 M 08/18/65 5050	--	8.1	228	19 .95 40	13 1.07 45	8.0 .35 15	0.8 .02 1	0.0 .00 .	148 2.43 98	2.8 .06 2	0.0 .00 .	0.1 .00 .	--	--	.0	--	135 116 0	103 0
21N/14E-36K01 M 08/18/65 5050	--	8.3	200	26 1.30 55	4.4 .36 16	11 .48 22	2.0 .05 2	0.0 .00 .	115 1.89 92	0.3 .01 .	4.2 .12 6	2.7 .04 2	--	--	.0	--	133 107 0	83 0
21N/15E-05D01 M 08/18/65 5050	--	8.3	1740	23 1.15 7	0.1 .01 .	332 14.44 91	9.5 .24 2	0.0 .00 .	128 2.10 13	186 3.87 24	349 9.84 62	11 .18 1	--	--	5.8	--	1040 979 0	58 0
21N/15E-09C03 M 08/18/65 5050	--	8.3	239	23 1.15 47	0.4 .03 1	26 1.13 46	4.9 .13 5	0.0 .00 .	121 1.98 84	13 .27 11	1.9 .05 2	4.4 .07 3	--	--	.1	--	182 133 0	59 0
20N/14E-04G02 M 08/18/65 5050	--	8.4	238	21 1.05 42	12 .99 39	9.2 .40 16	3.2 .08 3	3.0 .10 4	145 2.38 93	4.1 .09 4	0.0 .00 .	0.3 .00 .	--	--	.0	--	160 124 0	103 0
UPPER LAKE VALLEY				51300														
16N/C9W-31LC2 M 08/03/65 5050	--	8.3	235	--	--	9.6 .42	--	0.0 .00	121 1.98	--	4.0 .11	--	--	--	--	--	120	98 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB- FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
15N/10W-C3C01 M 08/03/65 5050	--	8.6	387	--	--	9.0 .39	--	8.0 .27	189 3.10	--	8.8 .25	--	--	238	194 26				
15N/10W-C3J01 M 08/03/65 5050	--	8.5	669	--	--	46 2.00	--	6.0 .20	162 2.66	--	29 .82	--	--	407	259 116				
15N/10W-10E01 M 08/03/65 5050	--	7.5	358	--	--	18 .78	--	0.0 .00	157 2.57	--	7.6 .21	--	--	207	144 16				
15N/10W-12K02 M 08/03/65 5050	--	7.7	174	--	--	7.4 .32	--	0.0 .00	101 1.66	--	3.8 .11	--	--	76	73 0				
15N/10W-24H01 M 08/03/65 5050	--	8.6	451	--	--	30 1.31	--	10 .33	226 3.71	--	21 .59	--	--	245	183 0				
15N/C9W-C6F01 M 08/03/65 5050	--	8.3	188	--	--	6.3 .27	--	0.0 .00	96 1.57	--	3.2 .09	--	--	112	85 7				
15N/C9W-07B01 M 08/03/65 5050	--	7.9	251	--	--	14 .61	--	0.0 .00	147 2.41	--	3.2 .09	--	--	166	101 0				
15N/C9W-31P01 M 08/03/65 5050	--	8.1	176	--	--	13 .57	--	0.0 .00	98 1.61	--	4.4 .12	--	--	120	60 0				
KELSEYVILLE VALLEY				51500															
14N/C9W-32J01 M 08/03/65 5050	--	7.8	812	--	--	19 .83	--	0.0 .00	487 7.99	--	20 .56	--	--	462	424 25				
14N/C9W-32J02 M 08/03/65 5050	--	8.5	536	--	--	13 .57	--	9.0 .30	318 5.22	--	8.7 .25	--	--	329	279 3				
13N/C9W-02C01 M 08/04/65 5050	--	8.6	700	--	--	11 .49	--	26 .87	351 5.76	--	14 .39	--	--	420	388 57				
13N/C9W-C3C01 M 08/03/65 5050	--	8.1	404	--	--	7.0 .30	--	0.0 .00	230 3.77	--	6.1 .17	--	--	219	207 19				

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER		TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
13N/C9W-08B01 M 08/03/65 5050					--	--	11 .48	--	--	23 .77	271 4.44	--	8.4 .24	--	--	--	330	301 41		
13N/C5W-08N02 M 08/03/65 5050					--	--	13 .57	--	--	5.0 .17	153 2.51	--	7.8 .22	--	--	--	165	126 0		
13N/C9W-12M01 M 08/03/65 5050					--	--	16 .70	--	--	13 .43	249 4.08	--	18 .51	--	--	--	284	214 0		
13N/C5W-17D01 M 08/03/65 5050					--	--	27 1.17	--	--	66 2.20	590 9.68 1	--	12 .34	--	--	--	617	565 0		
HIGH VALLEY					51600															
14N/C8W-23K01 M 08/04/65 5050					--	--	22 .96	--	--	0.0 .00	134 2.20	--	16 .45	--	--	--	161	98 0		
14N/C8W-24B02 M 08/04/65 5050					--	--	31 1.35	--	--	4.0 .13	159 2.61	--	3.9 .11	--	--	--	162	89 0		
14N/C8W-24H01 M 08/03/65 5050					--	--	56 2.44	--	--	0.0 .00	570 9.35 1	--	8.1 .23	--	--	--	540	392 0		
14N/C8W-24LC1 M 08/04/65 5050					--	--	67 2.91	--	--	0.0 .00	747 12.25 1	--	11 .31	--	--	--	650	486 0		
BURNS VALLEY					51700															
13N/C7W-15N01 M 08/04/65 5050					--	--	32 1.39	--	--	0.0 .00	162 2.66	--	6.0 .17	--	--	--	184	79 0		
13N/C7W-21H01 M 08/04/65 5050					--	--	11 .48	--	--	0.0 .00	93 1.53	--	6.5 .18	--	--	--	126	87 11		
13N/C7W-21JC1 M 08/04/65 5050					--	--	30 1.31	--	--	0.0 .00	410 6.72 1	--	14 .39	--	--	--	397	299 0		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HC03	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH			
COYOTE VALLEY																				
11N/C7W-33JC2 M 08/04/65 5050	--	8.1	206	51800 --	--	4.8 .21	--	0.0 .00	116 1.90	--	2.6 .07	--	--	109	97 2					
11N/C7W-35E01 M 08/04/65 5050	--	8.6	311	--	--	14 .61	--	8.0 .27	166 2.72	--	6.1 .17	--	--	182	138 0					
11N/C6W-15PC2 M 08/04/65 5050	--	8.4	436	--	--	5.1 .22	--	4.0 .13	269 4.41 1	--	4.8 .14	--	--	239	241 14					
10N/C7W-03L04 M 08/04/65 5050	--	8.5	279	--	--	6.0 .26	--	7.0 .23	146 2.39	--	3.3 .09	--	--	152	136 5					
10N/C7W-C3W01 M 08/04/65 5050	--	8.5	231	--	--	8.8 .38	--	6.0 .20	118 1.94	--	5.3 .15	--	--	172	102 0					
SACRAMENTO VALLEY				52100																
TEHAMA COUNTY				52101																
27N/C4W-01HC2 M 08/03/65 5050	70.0F	--	232	19 .95	9.1 .75	15 .65	--	--	--	--	--	--	--	--	85					
27N/C3W-10Q01 M 08/03/65 5050	73.0F	--	292	--	--	35 1.52	-	--	--	--	--	--	--	--	64					
27N/C3W-15C01 M 08/03/65 5050	70.0F	--	282	25 1.25	12 1.01	12 .52	--	--	--	--	--	--	--	--	113					
27N/C3W-19A01 M 08/03/65 5050	68.0F	--	230	21 1.05	7.6 .63	14 .61	--	--	--	--	--	--	--	--	84					
26N/C4W-10D01 M 08/03/65 5050	70.0F	--	367	30 1.50	18 1.50	23 1.00	--	--	--	--	--	--	--	--	150					
26N/C3W-C3N01 M 08/03/65 5050	78.0F	--	321	28 1.40	15 1.26	13 .57	--	--	--	--	--	--	--	--	133					

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	BC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER							MILLIGRAMS PER LITER PERCENT REACTANCE VALUE							MILLIGRAMS PER LITER			
				CA	MG	NA	K	CD3	HCD3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH				
26N/C3W-22G01 M 08/03/65 5050	68.0F	--	218	16 .80	8.0 .66	16 .70	--	--	--	--	--	--	--	--	--	--	73				
26N/C3W-29E01 M 08/03/65 5050	--	--	208	11 .55	11 .93	12 .52	--	--	--	--	--	--	--	--	--	--	74				
25N/C3W-C3N01 M 08/03/65 5050	--	--	376	26 1.30	21 1.80	20 .87	--	--	--	--	--	--	--	--	--	--	155				
25N/C3W-31R01 M 08/02/65 5050	76.0F	--	448	55 2.74	22 1.81	9.2 .40	--	--	--	--	--	--	--	--	--	--	228				
25N/C2W-04M01 M 08/03/65 5050	68.0F	--	268	22 1.10	12 1.06	11 .48	--	--	--	--	--	--	--	--	.4	--	108				
25N/C2W-C7K01 M 08/03/65 5050	66.0F	--	572	45 2.25	38 3.19	20 .87	--	--	--	--	--	--	--	--	--	--	272				
24N/C5W-21L01 M 08/03/65 5050	68.0F	--	336	25 1.25	9.6 .79	29 1.26	--	--	--	--	--	--	--	--	--	--	102				
24N/C3W-C3PC1 M 08/02/65 5050	70.0F	--	286	29 1.45	12 1.01	11 .48	--	--	--	--	--	--	--	--	--	--	123				
24N/C3W-04K01 M 08/02/65 5050	--	--	352	37 1.85	16 1.37	8.5 .37	--	--	--	--	--	--	--	--	--	--	161				
24N/C3W-14M01 M 08/02/65 5050	70.0F	--	259	24 1.20	11 .94	13 .57	--	--	--	--	--	--	--	--	--	--	107				
24N/C3W-20N01 M 08/02/65 5050	68.0F	--	179	12 .60	7.7 .64	13 .57	--	--	--	--	--	--	--	--	--	--	62				
24N/C2W-30C01 M 08/02/65 5050	70.0F	--	477	35 1.75	27 2.29	26 1.13	--	--	--	--	--	--	--	--	--	--	202				
23N/C3W-22Q01 M 08/02/65 5050	73.0F	--	328	26 1.30	14 1.18	20 .87	--	--	--	--	--	--	--	--	--	--	124				

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
23N/C3W-35B01 M 08/02/65 SC50	70.0F	--	222	17 .85	7.9 .65	14 .61	--	--	--	--	--	--	--	--	--	--	75	
23N/C2W-C5A01 M 08/02/65 SC50	70.0F	--	333	21 1.05	15 1.27	27 1.17	--	--	--	--	--	--	--	--	--	--	116	
23N/C1W-C9L01 M 07/30/65 SC50 0220	--	8.3	445	52 2.59 58	17 1.40 32	9.7 .42 9	1.2 .03 1	0.0 .00	195 3.20 72	16 .33 7	5.2 .15 3	48 .77 17	--	--	.0	307 245	198 38	
GLENN COUNTY																		
22N/C4W-10E01 M 08/03/65 SC50	--	--	545	51 2.54	30 2.51	--	--	--	--	--	--	--	--	--	--	--	253	
22N/C3W-C4G01 M 08/03/65 SC50	--	--	470	57 2.84	18 1.45	--	--	--	--	--	--	--	--	--	--	--	217	
22N/C3W-22G01 M 08/04/65 SC50	72.0F	--	436	52 2.59	13 1.12	--	--	--	--	--	--	--	--	--	--	--	186	
22N/C3W-25B01 M 08/03/65 SC50	68.0F	--	377	40 2.00	15 1.23	20 .87	--	--	--	--	21 .59	7.5 .12	--	--	--	--	163	
22N/C2W-03A01 M 08/03/65 SC50	--	--	512	49 2.45	22 1.81	27 1.17	--	--	--	--	35 .99	34 .55	--	--	--	--	211	
22N/C2W-26E01 M 08/03/65 SC50	68.0F	--	408	44 2.20	15 1.30	19 .83	--	--	--	--	--	--	--	--	--	--	175	
22N/C1W-29C01 M 08/04/65 SC50	72.0F	--	490	44 2.20	20 1.66	--	--	--	--	--	--	11 .18	--	--	--	--	193	
21N/C3W-C2G01 M 08/03/65 SC50	--	--	497	55 2.74	23 1.89	22 .96	--	--	--	--	28 .79	3.0 .05	--	--	--	--	232	
21N/C3W-14F01 M 08/04/65 SC50	76.0F	--	377	32 1.60	18 1.48	22 .96	--	--	--	--	--	--	--	--	--	--	154	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER							MILLIGRAMS PER LITER						
				PERCENT REACTANCE VALUE							MILLIGRAMS PER LITER				MILLIGRAMS PER LITER		
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH
21N/C3W-20D01 M 08/06/65 5050	71.0F	--	338	22 1.10	14 1.16	27 1.17	--	--	--	--	--	--	--	--	--	--	113
21N/C2W-02D01 M 08/03/65 5050	74.0F	--	594	70 3.49	28 2.30	24 1.04	--	--	--	--	26 .73	8.7 .14	--	--	--	--	292
21N/C2W-15C01 M 08/06/65 5050	70.0F	--	511	58 2.89	23 1.89	21 .91	--	--	--	--	33 .93	14 .23	--	--	--	--	239
20N/C4W-C2D01 M 08/06/65 5050	--	--	335	30 1.50	19 1.56	14 .61	--	--	--	--	6.3 .18	18 .29	--	--	--	--	152
20N/C3W-C2D01 M 08/04/65 5050	70.0F	--	426	46 2.30	19 1.56	--	--	--	--	--	--	--	--	--	--	--	193
20N/C2W-11G01 M 08/04/65 5050	--	--	399	39 1.95	19 1.61	18 .78	--	--	--	--	--	--	--	--	--	--	178
20N/C2W-13G01 M 08/04/65 5050	--	--	446	41 2.05	27 2.23	18 .78	--	--	--	--	--	--	--	--	--	--	214
19N/C3W-09J01 M 08/05/65 5050	--	--	496	--	--	51 2.22	--	--	--	--	--	--	--	--	--	--	172
19N/C3W-18F01 M 08/05/65 5050	--	--	605	44 2.20	23 1.92	57 2.48	--	--	--	--	--	--	--	--	--	--	206
19N/C2W-06G01 M 08/03/65 5050	--	--	326	32 1.60	16 1.34	--	--	--	--	--	--	--	--	--	--	--	147
19N/C2W-23N01 M 08/05/65 5050	--	--	694	46 2.30	47 3.92	48 2.09	--	--	--	--	--	--	--	--	--	--	311
18N/C4W-02F01 M 08/05/65 5050	--	--	1030	66 3.29	44 3.62	90 3.92	--	--	--	--	118 3.33	60 .97	--	--	--	--	348
18N/C3W-10K01 M 08/05/65 5050	78.0F	--	526	--	--	56 2.44	--	--	--	--	--	--	--	--	--	--	153

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	S102	TDS SUM	TH NCH	
18N/C2W-01E01 M 08/05/65 5050	--	--	390	27 1.35	20 1.65	29 1.26	--	--	--	--	--	--	--	--	--	--	150	
18N/C2W-07F01 M 08/05/65 5050	71.0F	--	588	33 1.65	29 2.43	51 2.22	--	--	--	59 1.23	--	--	--	--	--	--	204	
BUTTE COUNTY																		
22N/C1E-C9M01 M 07/30/65 5050	--	8.5	575	73 3.64 61	20 1.64 27	16 .70 12	1.1 .03	10 .33 5	272 4.46 74	9.7 .20 3	16 .45 7	36 .58 10	--	.0	--	339 315	266 27	
22N/C2E-18J01 M 07/30/65 5050	--	8.3	233	22 1.10 46	8.8 .72 30	12 .52 22	1.0 .03 1	0.0 .00	121 1.98 84	2.0 .04 2	9.4 .27 11	4.0 .06 3	--	.1	--	150 119	91 0	
21N/C1E-26G01 M 08/03/65 5050 1600	--	8.0	492	90 4.49 83	1.1 .09 2	18 .78 14	1.7 .04 1	16 .53 10	267 4.38 82	7.9 .16 3	6.6 .19 4	4.7 .08 1	--	.0	--	282 277	229 0	
21N/C3E-10G01 M 07/30/65 5050 1600	--	8.6	2590	46 2.30 9	1.9 .16 1	515 22.40 90	3.6 .09	10 .33 1	140 2.30 9	696 14.48 58	269 7.59 31	4.9 .08	--	5.3	--	1610 1620	123 0	
20N/C2E-29R01 M 08/04/65 5050 1100	--	8.7	550	90 4.49 80	1.8 .15 3	22 .96 17	1.7 .04 1	13 .43 8	208 3.41 62	13 .27 5	46 1.30 24	4.3 .07 1	--	.0	--	320 294	232 40	
20N/C3E-15H01 M 07/30/65 5050	--	7.8	157	21 1.05 66	3.8 .31 19	4.2 .18 11	2.1 .05 3	0.0 .00	90 1.48 92	2.5 .05 3	2.4 .07 4	0.4 .01 1	--	.0	--	108 81	68 0	
19N/C2E-16R01 M 09/03/65 5050 1500	--	7.9	219	23 1.15 53	7.2 .59 27	9.0 .39 18	1.0 .03 1	0.0 .00	116 1.90 85	1.8 .04 2	8.5 .24 11	3.9 .06 3	--	.0	--	152 111	87 0	
19N/C3E-36B01 M 09/03/65 5050 1430	--	8.6	424	37 1.85 43	15 1.23 28	28 1.22 28	1.5 .04 1	14 .47 11	196 3.21 73	13 .27 6	14 .39 9	4.7 .08 2	--	.6	--	245 224	153 0	
19N/C4E-06P01 M 07/30/65 5050 1630	--	8.7	313	33 1.65 50	9.6 .79 24	20 .87 26	0.8 .02 1	10 .33 10	156 2.56 78	4.3 .09 3	6.6 .19 6	6.6 .11 3	--	.0	--	215 167	122 0	
18N/C2E-12B01 M 08/03/65 5050 1600	--	8.6	480	85 4.24 81	1.7 .14 3	19 .83 16	0.8 .02	14 .47 9	246 4.03	8.2 .17 3	11 .31 6	5.0 .08 2	--	.0	--	276 255	219 0	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH			
18N/C3E-33N01 M 08/03/65 5050 1415	--	8.5	258	26 1.30 47	11 .90 33	11 .48 17	2.8 .07 3	8.0 .27 10	140 2.30 85	2.1 .04 1	3.3 .09 3	0.2 .00	--	.0	--	178 133	109 0			
18N/C4E-07A01 M 09/03/65 5050 1430	--	8.3	151	20 1.00 65	1.2 .10 6	9.6 .42 27	0.7 .02 1	0.0 .00	72 1.18 82	2.1 .04 3	4.7 .13 9	5.4 .09 6	--	.0	--	136 79	55 0			
18N/C4E-28M01 M 09/03/65 5050 1430	--	8.3	257	36 1.80 66	6.6 .54 20	7.7 .33 12	1.5 .04 1	0.0 .00	156 2.56 96	0.2 .00	2.8 .08 3	2.0 .03 1	--	.0	--	182 133	117 0			
17N/01E-01H01 M 09/03/65 5050 1350	--	8.6	528	51 2.54 45	21 1.73 30	31 1.35 24	2.7 .07 1	20 .67 12	263 4.31 76	3.1 .06 1	18 .51 9	5.3 .09 2	--	.1	--	280 281	212 0			
17N/C3E-18C01 M 08/03/65 5050 1645	--	8.8	703	88 4.39 54	33 2.71 33	24 1.04 13	1.0 .03	42 1.40 17	396 6.49 80	4.4 .09 1	2.8 .08 1	4.8 .08 1	--	.0	--	381 394	357 0			
17N/C3E-26C01 M 08/05/65 5050 1500	--	7.5	647	57 2.84 39	41 3.37 46	23 1.00 14	1.7 .04 1	0.0 .00	317 5.20 74	35 .73 10	23 .65 9	28 .45 6	--	.0	--	400 364	310 50			
COLUSA COUNTY 52104																				
17N/C3W-33R01 M 08/27/65 5050 1315	--	8.4	942	40 2.00 21	32 2.63 28	112 4.87 51	1.4 .04	4.0 .13 1	307 5.03 52	99 2.06 21	83 2.34 24	2.7 .04	--	.3	--	555 525	230 0			
17N/C2W-12C01 M 08/27/65 5050 1300	--	8.6	472	37 1.85 37	21 1.73 34	33 1.44 29	1.1 .03 1	12 .40 8	253 4.15 91	4.6 .10 2	16 .45 9	1.1 .02	--	.1	--	261 250	178 0			
16N/C3W-C9N01 M 08/27/65 5050 1330	--	8.4	626	40 2.00 33	20 1.64 27	56 2.44 40	0.6 .02	7.0 .23 4	228 3.74 63	6.4 .13 2	65 1.83 31	1.2 .02	--	.2	--	309 308	183 0			
16N/C2W-04H01 M 08/27/65 5050 1400	--	8.7	620	37 1.85 30	28 2.30 37	46 2.00 32	1.6 .04 1	12 .40 6	202 3.31 53	65 1.35 22	38 1.07 17	3.6 .06 1	--	.0	--	329 330	207 22			
16N/C2W-25B02 M 11/22/65 5050 1015	--	8.3	1380	61 3.04 19	52 4.27 27	192 8.35 53	2.9 .07	0.0 .00	777 12.74 80	87 1.81 11	37 1.04 7	20 .32 2	--	.2	--	877 833	367 0			
16N/C2W-35B01 M 08/23/65 5050 1100	--	8.7	738	21 1.05 14	23 1.89 25	103 4.48 60	1.4 .04 1	16 .53 7	245 4.02 53	82 1.71 23	45 1.27 17	1.3 .02	--	.2	--	427 413	146 0			

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE							MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH			
16N/01W-29J01 M 08/27/65 5050 1030	--	8.1	401	26 1.30 31	18 1.48 36	31 1.35 33	0.7 .02	0.0 .00	233 3.82 94	0.0 .00	8.6 .24 6	0.0 .00	--	.1	--	184 199	139 0			
15N/04W-25P01 M 09/15/65 5050 1445	--	8.7	1030	43 2.15 20	28 2.30 22	139 6.05 57	1.4 .04	26 .87 8	287 4.71 45	101 2.10 20	98 2.76 26	2.2 .04	--	.4	--	552 580	221 0			
15N/02W-32R01 M 08/23/65 5050 1040	--	8.3	648	40 2.00 30	25 2.06 31	60 2.61 39	0.6 .02	0.0 .00	283 4.64 70	42 .87 13	31 .87 13	13 .21 3	0.4	.1	--	350 351	202 0			
14N/02W-12HC2 M 08/23/65 5050 1020	--	8.7	649	45 2.25 34	26 2.14 32	50 2.18 33	2.3 .06 1	14 .47 7	262 4.30 66	19 .40 6	45 1.27 20	1.8 .03	--	.2	--	349 332	217 0			
14N/02W-29J01 M 09/15/65 5050 1600	--	8.4	265	14 .70 26	13 1.07 39	21 .91 34	1.1 .03 1	3.0 .10 4	127 2.08 77	2.3 .05 2	8.3 .23 9	14 .23 9	--	.0	--	148 139	89 0			
14N/02W-35P01 M 08/23/65 5050 1000	--	8.0	586	29 1.45 26	24 1.97 36	47 2.04 37	1.4 .04 1	0.0 .00	206 3.38 61	9.0 .19 3	68 1.92 34	5.2 .08 1	--	.5	--	286 285	173 4			
14N/01W-02C01 M 09/16/65 5050 1420	--	8.5	948	57 2.84 32	30 2.47 28	82 3.57 40	2.5 .06 1	4.0 .13 1	216 3.54 39	79 1.64 18	132 3.72 41	0.7 .01	--	.2	--	543 493	268 85			
14N/01W-12A01 M 08/26/65 5050 0800	--	8.7	615	21 1.05 18	1.1 .09 2	110 4.79 80	1.5 .04 1	1.0 .33 6	249 4.08 69	0.8 .02	52 1.47 25	0.3 .00	--	.5	--	360 319	57 0			
14N/01W-31Q01 M 08/23/60 5050 0920	--	8.6	556	46 2.30 45	12 .99 19	42 1.83 36	1.0 .03 1	8.0 .27 5	150 2.46 49	4.6 .10 2	73 2.06 41	8.1 .13 3	--	.4	--	295 269	165 29			
14N/01E-18A01 M 09/16/65 5050 1400	--	8.7	469	20 1.00 21	6.8 .56 12	74 3.22 67	1.2 .03 1	1.0 .33 7	219 3.59 77	12 .25 5	18 .51 11	0.5 .01	--	.2	--	266 250	78 0			
13N/02W-26A01 M 10/18/65 5050 1230	--	8.5	652	96 4.79 69	2.6 .21 3	44 1.91 27	1.5 .04 1	8.0 .27 4	241 3.95 59	6.4 .13 2	74 2.09 31	18 .29 4	--	.4	--	370 369	250 39			
13N/01W-15R02 M 09/16/65 5050 1230	--	8.3	549	36 1.80 33	15 1.23 23	53 2.31 43	2.2 .06 1	0.0 .00	246 4.03 74	10 .21 4	38 1.07 20	9.0 .14 3	--	.5	--	287 284	153 0			
13N/01W-36Q02 M 09/16/65 5050 1300	--	8.3	346	35 1.75 38	14 1.15 25	34 1.65 36	2.7 .07 2	0.0 .00	202 3.31 74	7.1 .15 3	35 .99 22	3.4 .05 1	--	.3	--	276 234	145 0			

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	S102	TDS SUM	TH NCH		
13N/01E-22J01 M 09/16/65 5050 1330 SUTTER COUNTY 16N/03E-04E01 M 07/27/65 5050 0930 15N/01E-16RC1 M 07/29/65 5050 1100 15N/01E-35H01 M 07/21/65 5050 1000 15N/02E-26D02 M 07/20/65 5050 1200 15N/03E-04C02 M 07/19/65 5050 1030 15N/03E-15C01 M 07/19/65 5050 15N/03E-23C01 M 07/19/65 5050 15N/03E-26M01 M 07/26/65 5050 1630 15N/03E-29G01 M 07/26/65 5050 1315 14N/01E-01A01 M 07/21/65 5050 1030 14N/01E-24N01 M 07/02/65 5050 1100	--	8.4	558	57 2.84 52	18 1.48 27	23 1.00 18	4.0 .10 2	2.0 .07 1	222 3.64 68	8.2 .17 3	51 1.44 27	0.9 .01	--	.1	--	327 273	216 31		
	--	8.5	299	23 1.15 37	16 1.32 43	14 .61 20	0.8 .02 1	5.0 .17 6	118 1.94 63	27 .56 18	3.3 .09 3	19 .31 10	--	.0	--	220 166	124 19		
	--	8.5	607	38 1.90 27	46 3.78 55	27 1.17 17	2.3 .06 1	9.0 .30 4	338 5.54 81	17 .35 5	22 .62 9	3.9 .06 1	--	.1	--	355 331	283 0		
	--	8.6	750	77 3.84 47	43 3.53 44	16 .70 9	1.2 .03	10 .33 4	302 4.95 62	30 .62 8	74 2.09 26	0.7 .01	--	.0	--	466 400	370 106		
	--	8.0	743	65 3.24 41	34 2.79 35	43 1.87 24	1.3 .03	0.0 .00	319 5.23 67	21 .44 6	49 1.38 18	44 .71 9	--	.1	--	447 414	304 43		
	--	8.4	806	61 3.04 34	55 4.52 51	29 1.26 14	2.2 .06 1	7.0 .23 3	335 5.49 61	85 1.77 20	27 .76 8	48 .77 9	--	.1	--	568 478	379 93		
	--	8.6	387	23 1.15 28	7.9 .65 16	50 2.18 54	3.4 .09 2	10 .33 8	199 3.26 79	0.5 .01 2	18 .51 12	0.6 .01	--	.3	--	257 211	90 0		
	--	8.2	152	15 .75 46	7.9 .65 40	4.7 .20 12	0.9 .02 1	0.0 .00	86 1.41 92	2.5 .05 3	2.5 .07 5	0.7 .01 1	--	.0	--	99 76	70 0		
	--	8.6	403	29 1.45 33	15 1.23 28	39 1.70 38	2.7 .07 2	10 .33 7	222 3.64 82	4.8 .10 2	13 .37 8	0.8 .01	--	.2	--	241 223	134 0		
	--	8.6	755	62 3.09 34	52 4.27 47	37 1.61 13	1.5 .04	20 .67 8	398 6.53 74	36 .75 8	16 .45 5	28 .45 5	--	.0	--	488 448	367 7		
	--	8.3	617	65 3.24 46	32 2.63 37	28 1.22 17	1.1 .03	0.0 .00	369 6.05 87	18 .37 5	16 .45 7	3.2 .05 1	--	.0	--	315 344	294 0		
	--	8.6	423	32 1.60 34	21 1.73 36	32 1.39 29	1.3 .03	10 .33	223 3.66 79	21 .44 10	6.7 .19 4	0.5 .01	--	.1	--	248 234	166 0		

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLO-PH	EC LAB FLO	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER									
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
14N/C3E-03C02 M 07/30/65 5050 1300	--	8.7	1000	42 2.10 20	66 5.43 53	62 2.70 26	4.1 .10 1	19 .63 6	228 3.74 37	67 1.39 14	156 4.40 43	0.8 .01	--	.2	--	614 529 161	379 161		
14N/C3E-05A03 M 07/22/65 5050 1400	--	8.5	1120	88 4.39 35	63 5.18 41	71 3.09 24	1.8 .05	16 .53 4	474 7.77 62	100 2.08 17	75 2.12 17	3.3 .05	--	.1	--	670 650	481 66		
14N/C3E-14E02 M 07/28/65 5050 0900	--	8.4	228	22 1.10 45	13 1.07 43	6.0 .26 11	1.2 .03 1	4.0 .13 5	129 2.12 86	4.8 .10 4	3.4 .10 4	0.5 .01	--	.0	--	111 118	108 0		
14N/C3E-16B02 M 07/21/65 5050 1300	--	8.3	1430	82 4.05 29	87 7.15 51	63 2.74 19	3.0 .08 1	0.0 .00	255 4.18 30	77 1.60 11	292 8.23 59	0.7 .01	--	.1	--	895 730	564 355		
14N/C3E-18A02 M 07/21/65 5050 1700	--	8.5	700	54 2.65 35	40 3.29 43	38 1.65 22	1.7 .04 1	12 .40 5	365 5.99 76	28 .58 7	32 .90 11	0.6 .01	--	.1	--	396 385	301 0		
14N/C3E-23M02 M 07/26/65 5050 1600	--	8.6	298	27 1.35 42	13 1.07 34	17 .74 23	1.2 .03 1	8.0 .27 9	143 2.35 75	18 .37 12	4.3 .12 4	0.4 .01	--	.1	--	192 159	120 0		
13N/C3E-10M02 M 07/20/65 5050 1100	--	8.3	913	91 4.54 47	39 3.21 33	43 1.87 19	1.1 .03	0.0 .00	351 5.76 60	24 .50 5	120 3.38 35	1.3 .02	--	.0	--	569 491	387 99		
13N/C4E-21A01 M 07/20/65 5050 0945	--	8.3	877	72 3.59 36	64 5.26 53	23 1.00 10	1.7 .04	0.0 .00	263 4.31 43	262 5.45 54	9.9 .28 3	3.6 .06 1	--	.0	--	647 565	445 230		
12N/C2E-09B02 M 07/26/65 5050 1030	--	8.7	643	27 1.35 21	0.4 .03	118 5.13 78	1.7 .04 1	12 .40 6	237 3.89 61	16 .33 5	62 1.75 27	0.7 .01	--	.5	--	402 354	69 0		
12N/C2E-11N01 M 07/26/65 5050 1000	--	8.6	1280	31 1.55 13	14 1.15 9	220 9.57 77	5.1 .13 1	12 .40 3	240 3.94 33	0.0 .00	270 7.61 63	2.2 .04	--	.9	--	728 673	135 0		
12N/C2E-14B01 M 07/26/65 5050 0930	--	8.6	4310	152 7.58 18	112 9.21 22	565 24.58 59	2.6 .07	9.0 .30 1	172 2.82 7	0.0 .00	1370 38.63 93	0.4 .01	--	.8	--	2790 2296	841 686		
12N/C2E-16R01 M 07/26/65 5050 1015	--	8.9	979	45 2.25 22	8.8 .72 7	169 7.35 70	4.3 .11 1	37 1.23 12	360 5.90 58	17 .35 3	95 2.68 26	0.7 .01	--	.6	--	577 554	148 0		
12N/C2E-23Q01 M 07/26/65 5050 1115	--	8.6	957	23 1.15 12	6.7 .55 6	178 7.74 8	3.2 .08 1	12 .40 4	250 4.10 44	0.6 .01	170 4.79 51	2.4 .04	--	.7	--	571 519	85 0		

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER										MILLIGRAMS PER LITER				
				PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SD4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
12N/C2E-26A01 M 07/26/65 SC50 1100	--	8.7	1070	28 1.40 13	8.8 .72 7	192 8.35 79	2.3 .06 1	17 .57 5	248 4.07 39	0.0 .00 55	203 5.72 55	2.2 .04	--	--	.6	--	608 575	106 0
12N/C3E-26R01 M 07/20/65 S050 1030	--	8.5	734	60 2.99 42	20 1.64 23	55 2.34 34	2.6 .07 1	8.0 .27 4	198 3.25 45	8.2 .17 2	126 3.55 49	0.8 .01	--	--	.1	--	423 378	234 58
11N/C4E-05C01 M 07/20/65 S050 1000	--	8.6	298	28 1.40 42	16 1.32 40	13 .57 17	1.2 .03 1	8.0 .27 8	142 2.33 68	24 .50 15	11 .31 9	0.7 .01	--	--	.1	--	184 172	138 8
YUBA COUNTY																		
16N/C3E-11N01 M 07/13/65 S050 1030	--	8.6	1320	95 4.74 39	31 2.55 21	108 4.70 39	3.8 .10 1	10 .33 3	154 2.53 21	7.9 .16 1	325 9.17 75	1.4 .02	--	--	.5	--	952 658	366 223
16N/C3E-23B01 M 07/12/65 S050 1136	--	8.5	286	21 1.05 34	18 1.48 48	12 .52 17	1.5 .04 1	6.0 .20 7	136 2.23 74	10 .21 7	8.7 .25 8	8.1 .13 4	--	--	.0	--	187 152	127 6
16N/C3E-26C01 M 07/13/65 S050 1147	--	8.6	284	28 1.40 46	9.7 .80 26	18 .78 26	2.5 .06 2	10 .33 11	126 2.07 70	8.2 .17 6	13 .37 13	0.4 .01	--	--	.1	--	218 152	110 0
16N/C4E-05C01 M 07/12/65 S050 1114	--	7.5	220	14 .70 34	11 .90 44	10 .44 21	0.4 .01	0.0 .00	81 1.33 66	2.8 .06 3	14 .39 19	15 .24 12	--	--	.0	--	182 107	79 13
16N/C4E-05C02 M 07/13/65 S050 1120	--	7.7	209	15 .75 35	9.1 .75 35	14 .61 28	2.0 .05 2	0.0 .00	97 1.59 76	6.6 .14 7	13 .37 18	0.3 .00	--	--	.1	--	168 108	75 0
15N/C4E-20J02 M 07/15/65 S050 1230	--	8.6	428	32 1.60 37	26 2.14 49	13 .57 13	1.2 .03 1	7.0 .23 5	177 2.90 67	47. .98 23	6.3 .18 4	1.2 .02	--	--	.0	--	271 220	187 31
15N/C4E-31A01 M 07/15/65 S050	--	8.5	252	21 1.05 39	13 1.07 40	12 .52 20	0.9 .02 1	4.0 .13 5	134 2.20 85	0.8 .02 1	8.4 .24 9	0.8 .01	--	--	.0	--	172 127	105 0
15N/C5E-19N01 M 07/14/65 S050 1033	76.0F	8.3	198	14 .70 37	5.8 .48 25	16 .70 37	1.1 .03 2	0.0 .00	81 1.33 72	1.6 .03 2	14 .39 21	6.0 .10 5	--	--	.0	--	170 98	59 0
14N/C3E-24P01 M 07/15/65 S050 1140	--	7.5	284	23 1.15 42	6.4 .53 19	23 1.00 36	3.1 .08 3	0.0 .00	119 1.95 72	0.0 .00	26 .73 27	0.8 .01	--	--	.2	--	194 141	84 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB-FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH
14N/C4E-07M01 M 07/15/65 5050 1130	--	8.2	595	74 3.69 61	16 1.32 22	24 1.04 17	1.3 .03	0.0 .00	270 4.43 72	57 1.19 19	20 .56 9	0.4 .01	--	.0	--	330 325	250 29
14N/C4E-22H01 M 08/06/65 5050 0922	--	8.5	237	22 1.10 44	7.5 .62 25	17 .74 30	1.3 .03 1	5.0 .17 7	104 1.71 72	2.8 .06 3	14 .39 16	2.6 .04 2	--	.0	--	189 123	86 0
14N/C5E-15C01 M 07/15/65 5050 0850	--	7.9	208	14 .70 35	8.5 .70 35	13 .57 29	0.8 .02 1	0.0 .00	83 1.36 71	6.4 .13 7	13 .37 19	3.3 .05 3	--	.0	--	183 100	70 2
14N/C5E-16C02 M 07/15/65 5050 0840	69.0F	8.3	220	14 .70 33	6.3 .52 24	21 .91 42	0.8 .02 1	0.0 .00	93 1.53 73	2.8 .06 3	16 .45 22	3.4 .05 2	--	.0	--	198 110	61 0
14N/C5E-21G01 M 07/15/65 5050 0945	67.0F	8.3	485	34 1.70 41	7.0 .58 14	43 1.87 45	1.4 .04 1	0.0 .00	98 1.61 39	6.7 .14 3	82 2.31 56	4.9 .08 2	--	.0	--	350 227	11 0
14N/C5E-22M01 M 08/06/65 5050 1255	--	8.3	366	30 1.50 44	3.4 .28 8	36 1.57 46	1.7 .04 1	0.0 .00	88 1.44 44	7.9 .16 5	58 1.64 50	3.2 .05 2	--	.1	--	255 183	89 17
14N/C5E-32R01 M 08/16/65 5050	--	8.5	284	25 1.25 44	9.1 .75 27	18 .78 28	1.1 .03 1	4.0 .13 5	112 1.84 67	4.6 .10 4	23 .65 24	2.6 .04 1	--	.0	--	211 142	100 2
14N/C5E-32R02 M 08/13/65 5050 1435	65.0F	8.5	314	29 1.45 47	12 .99 32	14 .61 20	0.9 .02 1	4.0 .13 4	111 1.82 61	4.3 .09 3	31 .87 29	3.3 .05 2	--	.0	--	218 153	121 24
13N/C5E-04B02 M 07/15/65 5050 0958	--	8.2	845	37 1.85 25	9.6 .79 11	106 4.61 63	1.8 .05 1	0.0 .00	115 1.89 26	15 .31 4	182 5.13 70	2.3 .04 1	--	.5	--	498 411	132 38
PLACER COUNTY 52107																	
13N/C5E-24F01 M 08/00/65 5050	--	8.3	465	-- 14 .61	-- 14 .61		--	0.0 .00	181 2.97	--	36 1.02	--	--	--	--	300	208 60
13N/C6E-16C01 M 08/00/65 5050	--	7.8	139	-- 12 .52	-- 12 .52		--	0.0 .00	50 .82	--	5.4 .15	--	--	--	--	118	39 0
12N/C5E-02B01 M 08/00/65 5050	--	7.5	212	-- 9.4 .41	-- 9.4 .41		--	0.0 .00	89 1.46	--	8.5 .24	--	--	--	--	158	84 11

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH	
11N/C5E-21A01 M 08/00/65 5050	--	8.2	293	--	--	28 1.22	--	0.0 .00	126 2.07	--	22 .62	--	--	--	204	80 0		
11N/C6E-16M01 M 08/00/65 5050	--	8.1	378	--	--	46 2.00	--	0.0 .00	92 1.51	--	56 1.58	--	--	--	277	75 0		
11N/C6E-27G01 M 08/00/65 5050	--	8.2	269	--	--	22 .96	--	0.0 .00	130 2.13	--	14 .39	--	--	--	204	86 0		
11N/C6E-34B01 M 08/00/65 5050	--	8.3	268	--	--	21 .91	--	0.0 .00	136 2.23	--	10 .28	--	--	--	226	90 0		
10N/C5E-C6D01 M 08/00/65 5050	--	8.6	309	--	--	30 1.31	--	6.0 .20	130 2.13	--	19 .54	--	--	--	200	90 0		
10N/C6E-05C01 M 08/00/65 5050	--	8.2	184	--	--	15 .65	--	0.0 .00	85 1.39	--	10 .28	--	--	--	177	58 0		
10N/C6E-10C01 M 08/00/65 5050	--	8.3	398	--	--	25 1.09	--	0.0 .00	184 3.02	--	27 .76	--	--	--	297	152 1		
SACRAMENTO COUNTY																		
10N/05E-24C01 M 09/09/65 5050	--	8.4	370	18 .90 25	8.0 .66 1.8	47 2.04 5.6	2.2 .06 2	4.0 .13 3	134 2.20 59	9.7 .20 5	42 1.18 32	2.0 .03 1	--	.4	287 199	78 0		
09N/C4E-C8N01 M 09/08/65 5050	--	8.5	700	17 .85 12	6.2 .51 7	135 5.87 80	3.3 .08 1	10 .33 5	275 4.51 63	26. .54 8	64 1.80 25	0.2 .00	--	2.0	447 398	68 0		
09N/C4E-27R03 M 09/08/65 5050	--	8.1	281	27 1.35 45	14 1.15 3.8	11 .48 1.6	2.0 .05 2	0.0 .00	164 2.69 92	0.3 .01	7.5 .21 7	1.1 .02 1	--	.1	175 143	124 0		
09N/C4E-27R04 M 09/08/65 5050	--	8.7	451	44 2.20 42	28 2.30 44	14 .61 1.2	3.2 .08 2	16 .53 11	245 4.02 80	5.9 .12 2	12 .34 7	0.2 .00	--	.1	276 243	224 0		
09N/C4E-27R05 M 09/08/65 5050	--	8.1	411	38 1.90 42	21 1.73 3.8	19 .83 1.8	2.7 .07 2	0.0 .00	238 3.90 89	6.9 .14 3	12 .34 8	0.6 .01	--	.2	250 217	181 0		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER							MILLIGRAMS PER LITER						
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH
09N/C4F-23L01 M 08/26/65 S05C 0230	--	8.3	1740	81 4.04 25	34 2.79 17	212 9.22 57	5.9 .15 1	0.0 .00 0	235 3.85 24	0.8 .02 76	435 12.27 76	0.5 .01 0	--	1.6	--	997 886	344 152
09N/C6E-03A01 M 09/09/65 S05C	--	8.2	263	24 1.20 44	10 .82 30	14 .61 22	3.6 .09 3	0.0 .00 0	139 2.28 06	1.6 .03 1	1.4 .04 2	1.9 .03 1	--	.0	--	204 125	102 0
09N/C6L-03C01 M 09/09/65 S05C	--	8.2	474	--	--	31 1.35	--	0.0 .00 0	149 2.44	--	62 1.75	--	--	--	--	--	162 40
09N/C6L-04G01 M 09/09/65 S05C	60.0F	8.3	267	--	--	15 .65	--	0.0 .00 0	124 2.03	--	11 .31	--	--	--	--	188	99 0
09N/C6E-05G01 M 09/09/65 S05C	--	8.3	176	15 .75 40	7.9 .65 35	9.0 .39 21	2.9 .07 4	0.0 .00 0	92 1.51 83	1.2 .02 1	8.8 .25 14	2.4 .04 2	--	.0	--	153 92	70 0
09N/C6E-10D01 M 09/09/65 S05C	--	8.3	246	20 1.00 41	9.0 .74 31	14 .51 25	2.9 .07 3	0.0 .00 0	105 1.72 72	1.6 .03 1	21 .59 25	3.4 .05 2	--	.0	--	190 123	87 1
09N/C6E-27P01 M 09/06/65 S05C	--	8.3	255	--	--	15 .65	--	0.0 .00 0	131 2.15	--	8.5 .24	--	--	--	--	142	96 0
09N/C6F-29M02 M 09/09/65 S05C	69.0F	8.1	218	20 1.00 42	11 .90 38	8.7 .33 16	4.7 .12 5	0.0 .00 0	128 2.10 91	0.3 .01	6.8 .19 8	1.0 .02 1	--	.0	--	168 115	95 0
09N/C6L-32D02 M 09/09/65 S05C	--	8.3	237	--	--	9.4 .41	--	0.0 .00 0	119 1.95	--	7.6 .21	--	--	--	--	156	98 1
09N/C7E-32B01 M 07/28/65 S05C	--	7.3	165	13 .55 40	8.1 .67 41	6.8 .30 18	0.6 .02 1	0.0 .00 0	75 1.23 77	4.1 .09 6	4.4 .12 8	9.6 .15 9	--	.0	--	137 83	66 5
08N/C4F-03B01 M 08/26/65 S05C 0245	--	7.8	803	48 2.40 32	25 2.06 27	66 2.87 38	6.5 .17 2	0.0 .00 0	173 2.84 38	0.2 .00	163 4.60 62	0.0 .00	--	.4	--	446 394	224 82
08N/C6E-15F01 M 07/22/65 S05C	--	8.6	361	40 2.00 52	13 1.07 28	15 .65 17	4.7 .12 3	11 .37 10	160 2.62 70	0.3 .01	25 .71 19	1.7 .03 1	--	.0	--	232 189	152 3
08N/C7E-02N02 M 07/22/65 S05C	--	7.9	161	13 .65 41	5.2 .43 27	11 .48 30	1.4 .04 3	0.0 .00 0	72 1.18 75	3.4 .07 4	9.3 .26 16	4.2 .07 4	--	.0	--	163 83	54 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	PC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CU3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
07N/C7E-27B01 M 07/28/65 5050	--	8.5	362	31 1.55 41	19 1.56 41	14 .61 16	1.4 .04 1	6.0 .20 5	145 2.38 64	1.3 .03 1	27 .76 21	20 .32 9	--	.0	--	--	235 191	154 25	
05N/C5E-33J01 M 08/00/65 5050	--	8.6	352	12 .60 16	4.6 .38 10	56 2.87 74	0.7 .02 1	8.0 .27 7	198 3.25 85	0.0 .00 0	9.4 .27 7	1.7 .03 1	--	.5	--	--	222 200	49 0	
05N/C8E-31J01 M 08/00/65 5050	--	8.4	181	12 .60 33	6.6 .54 30	14 .61 34	2.5 .06 3	2.0 .07 4	84 1.38 79	5.0 .10 6	5.3 .15 9	3.1 .05 3	--	.0	--	--	179 92	57 0	
04N/C3E-31F02 M 08/04/65 5050 1010	66.0F	8.9	834	--	--	139 6.05	--	26 .87	314 5.15	--	71 2.00	--	--	--	--	--	476	144 0	
YOLO COUNTY																			
12N/C2W-02A01 M 07/20/65 5050 0405	74.0F	8.5	892	59 2.94 47	5.1 .42 7	65 2.83 45	1.2 .03	5.0 .17 3	174 2.85 46	6.9 .14 2	97 2.74 44	21 .34 5	--	.9	--	--	467 346	168 17	
12N/C1W-15N01 M 07/20/65 5050 0350	76.0F	8.4	481	49 2.45 47	2.6 2.14 41	15 .65 12	0.4 .01	4.0 .13 3	257 4.21 81	3.6 .07 1	19 .54 10	14 .23 4	--	.1	--	--	259 257	228 11	
11N/C3W-09001 M 07/26/65 5050 0355	--	8.1	1020	91 4.54 42	4.3 3.53 33	60 2.61 24	1.2 .03	0.0 .00	345 6.31 58	54 1.12 10	119 3.36 31	7.4 .12 1	--	.2	--	--	551 564	405 90	
11N/C3W-10E01 M 07/26/65 5050 0500	--	8.5	762	25 1.25 16	19 1.56 19	119 5.18 65	1.5 .04	9.0 .30 4	270 4.43 55	66 1.37 17	66 1.86 23	3.4 .05 1	--	2.2	--	--	503 443	144 0	
11N/C3W-26M03 M 07/26/65 5050 0345	--	7.9	981	94 4.69 42	4.6 3.78 34	60 2.61 24	0.7 .02	0.0 .00	456 7.48 69	42 .87 8	86 2.43 22	6.8 .11 1	--	1.1	--	--	522 560	423 49	
11N/C2W-25J01 M 07/20/65 5050 0430	74.0F	8.6	520	42 2.10 35	27 2.22 38	36 1.57 27	0.8 .02	14 .47 8	258 4.23 74	14 .29 5	13 .37 6	21 .34 6	--	.2	--	--	306 294	216 0	
11N/C1E-04R01 M 07/20/65 5050 0335	78.0F	8.7	931	29 1.45 14	44 3.62 34	127 5.52 52	1.9 .05	24 .80 8	458 7.51 71	52 1.08 10	42 1.18 11	0.1 .00	--	3.2	--	--	522 548	256 0	
11N/C1L-17M01 M 07/20/65 5050 0320	70.0F	8.8	516	32 1.60 27	33 2.71 46	36 1.57 27	1.6 .04	18 .60 10	285 4.07 82	5.3 .11 2	7.8 .22 4	7.3 .12 2	--	.6	--	--	245 281	214 0	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	R	SI02	TDS SUM	TH NCH	
11N/C2F-22A01 M 07/20/65 5050 0300	76.0F	8.5	1600	51 2.54 14	77 6.33 35	206 8.96 50	3.0 .08	14 .47 3	528 8.66 49	146 3.04 17	187 5.27 30	9.2 .15 1	--	5.4	--	916 957	444 0	
11N/C2E-22G01 M 09/11/65 5050 0110	--	8.2	1110	51 2.54 21	61 5.01 41	106 4.61 38	1.5 .04	0.0 .00	551 9.04 73	48 1.00 8	79 2.23 18	12 .19 2	--	3.3	--	639 632	378 0	
10N/C2W-21M01 M 07/20/65 5050 0440	70.0F	8.6	501	32 1.60 29	26 2.14 38	44 1.91 34	1.2 .03 1	15 .50 9	271 4.44 79	14 .29 5	9.6 .27 5	5.3 .09 2	--	.1	--	266 280	187 0	
10N/C2W-16L01 M 07/20/65 5050 0500	75.0F	8.4	1790	116 5.79 29	85 6.94 35	158 6.87 35	2.1 .05	8.0 .27 1	600 9.84 50	61 1.27 6	288 8.12 41	8.1 .13 1	--	1.7	--	1090 1022	640 135	
10N/C2W-17J02 M 07/20/65 5050 0515	75.0F	8.6	967	31 1.55 15	24 1.97 21	136 5.92 62	2.8 .07 1	13 .43 4	278 4.56 47	35 .73 8	105 2.95 31	61 .98 10	--	.3	--	556 544	176 0	
10N/C2W-18F01 M 07/20/65 5050 0510	78.0F	8.5	2030	36 4.29 21	46 3.78 19	278 12.09 60	0.7 .02	16 .53 3	480 7.87 39	86 1.79 9	346 9.76 48	22 .35 2	--	.9	--	1180 1117	406 0	
10N/C2W-18L01 M 06/27/65 5050 0220	--	8.3	1440	116 5.74 36	52 4.27 26	141 6.13 38	1.1 .03	0.0 .00	482 7.90 49	166 3.45 21	167 4.71 29	0.5 .01	--	1.4	--	818 881	502 107	
10N/C2W-23A01 M 07/20/65 5050 0450	75.0F	8.7	436	35 1.75 35	15 1.56 31	39 1.70 34	1.5 .04 1	17 .57 12	235 3.85 79	9.2 .19 4	7.3 .21 4	4.6 .07 1	--	.2	--	250 248	166 0	
10N/C1W-04C01 M 07/29/65 5050 0530	--	8.5	578	15 .75 12	40 3.29 56	42 1.83 31	0.9 .02	8.0 .27 5	284 4.66 81	9.0 .19 3	19 .54 9	4.3 .07 1	--	.3	--	296 278	200 0	
10N/C1E-01C01 M 07/21/65 5050 0545	--	8.6	839	47 2.35 25	58 4.77 51	52 2.26 24	2.0 .05 1	21 .70 8	367 6.02 65	25 .52 6	63 1.78 19	16 .26 3	--	2.0	--	443 466	357 21	
10N/C1E-15C01 M 07/21/65 5050 0425	--	8.5	1110	60 2.99 24	64 5.26 42	97 4.22 34	0.9 .02	20 .67 5	410 6.72 54	130 2.70 22	78 2.20 18	4.5 .07 1	--	1.3	--	666 657	412 43	
10N/C2E-01C01 M 07/20/65 5050 0250	71.0F	8.1	3120	149 7.44 22	216 17.76 52	202 3.79 26	4.8 .12	0.0 .00	454 7.45 22	458 9.53 28	607 17.12 50	2.3 .04	--	5.1	--	1920 1857	1260 888	
10N/C2E-27F01 M 07/21/65 5050 0345	--	8.5	604	41 2.05 31	29 2.28 27	47 2.04 31	1.7 .04 1	12 .40 6	254 4.17 65	15 .31 5	53 1.49 23	1.1 .02	--	1.7	--	331 326	221 0	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAU-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
09N/C1W-16H01 M 07/21/65 5050 0510	--	8.6	939	60 2.99 30	30 2.47 26	100 4.35 44	1.4 .04	14 .47 5	296 4.85 50	73 1.52 16	103 2.90 30	1.8 .03	--	.8	--	520 529	274 8		
09N/C1W-30L01 M 07/21/65 5050 0455	--	8.6	874	44 2.20 24	36 2.96 32	91 3.06 43	1.4 .04	13 .60 7	284 4.66 51	60 1.25 14	82 2.31 25	16 .26 3	--	.9	--	478 468	259 0		
09N/C1E-12A01 M 07/21/65 5050 0410	--	8.3	928	50 2.50 24	58 4.77 47	67 2.91 29	1.3 .03	0.0 .00 0	402 6.59 65	44 .92 9	87 2.45 24	11 .18 2	--	1.6	--	509 517	366 37		
09N/C2E-04L01 M 07/21/65 5050 0410	--	8.4	876	40 2.00 21	48 3.95 41	82 3.57 37	1.6 .04	8.0 .27 3	400 6.56 68	34 .71 7	63 1.78 19	16 .26 3	--	2.5	--	476 491	299 0		
09N/C2E-10U01 M 07/21/65 5050 0350	--	8.5	663	32 1.60 22	43 3.52 48	50 2.18 30	2.6 .07 1	13 .43 6	299 4.90 67	43 .89 12	34 .96 13	5.2 .08 1	--	.5	--	382 370	257 0		
09N/C3E-07D02 M 07/21/65 5050 0610	--	8.7	620	33 1.65 24	30 2.47 36	61 2.65 39	2.1 .05 1	20 .67 10	280 4.59 67	24 .50 7	37 1.04 15	0.4 .01	--	1.8	--	339 347	208 0		
08N/C1W-13G01 M 07/26/65 5050 0210	71.0F	8.1	651	47 2.35 34	30 2.47 26	43 2.09 30	0.9 .02	0.0 .00 0	338 5.54 30	23 .48 7	28 .79 11	8.9 .14 2	--	.4	--	347 352	242 0		
08N/C1E-09F01 M 07/21/65 5050 0440	--	8.3	769	48 2.40 30	38 3.12 40	53 2.31 29	2.1 .05 1	0.0 .00 0	375 6.15 75	22 .46 6	54 1.52 18	7.4 .12 1	--	2.0	--	393 410	275 0		
08N/C1L-26F01 M 08/05/65 5050 1000	66.0F	8.7	939	--	--	52 2.26	--	26 .87	460 7.54	--	18 .91	--	--	--	--	562	437 17		
08N/C2L-13F02 M 07/27/65 5050 1015	--	8.6	563	30 1.50 19	50 4.11 53	48 2.04 27	1.1 .03	20 .07 9	346 5.67 75	28 .58 8	20 .56 7	3.8 .06 1	--	.4	--	380 371	282 0		
08N/C3L-05P01 M 08/26/65 5050 0915	--	8.9	782	32 1.50 19	38 3.12 37	82 3.57 43	2.9 .07 1	20 .67 8	328 5.38 63	55 1.14 13	49 1.38 16	1.6 .03	--	.9	--	459 442	236 0		
08N/C3E-05G01 M 08/26/65 5050 0520	--	8.6	736	35 1.25 16	41 3.37 47	74 3.22 41	2.4 .06 1	16 .53 7	318 5.22 65	45 .94 12	47 1.33 17	1.9 .03	--	.9	--	420 409	230 0		
08N/C3E-16U01 M 07/27/65 5050 1030	--	8.0	1100	33 2.64 17	110 9.21 60	31 3.52 23	1.6 .04	0.0 .00 0	672 11.02 74	103 2.14 14	60 1.69 11	2.2 .04	--	.8	--	756 743	592 41		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
08N/03E-19M02 M 07/27/65 5050 1040	--	8.4	1700	44 2.20 11	135 1.10 53	172 7.48 36	1.7 .04 3	16 .53 3	884 14.50 71	129 2.68 13	66 1.86 9	52 .84 4	--	1.9	--	1030 1051	664 0		
07N/03E-09J01 M 07/27/65 5050 1145	--	8.4	1020	30 1.50 13	83 6.62 60	69 3.00 26	1.2 .03 5	15 .50 5	423 6.94 63	43 .89 8	52 1.75 16	62 1.00 9	--	.8	--	599 573	416 44		
07N/03E-21M01 M 07/21/65 5050 1140	--	8.2	1080	46 2.30 18	79 6.49 52	85 3.79 30	1.2 .03 3	0.0 .00 1	582 9.54 77	64 1.33 11	33 .93 8	36 .58 5	--	1.1	--	591 630	440 0		
07N/04E-33G01 M 08/26/65 5050 0320	--	8.4	1960	62 3.09 17	23 1.89 11	295 12.83 72	4.7 .12 1	4.0 .13 1	224 3.67 21	0.2 .00 14.02	497 14.02 79	1.2 .02 5	--	2.0	--	1070 999	248 58		
06N/03L-25A01 M 08/26/65 5050 0415	--	8.0	484	11 .55 11	2.8 .31 6	91 3.96 81	2.0 .05 1	8.0 .27 5	209 3.43 69	24 .50 10	28 .79 16	0.7 .01 5	--	.8	--	300 272	43 0		
06N/03L-25A02 M 08/26/65 5050 0420	--	8.6	608	16 .80 13	18 1.48 23	91 3.96 63	2.4 .06 1	10 .33 5	218 3.58 58	22 .46 8	62 1.75 29	0.3 .00 5	--	1.0	--	347 330	112 0		
SAN JOAQUIN VALLEY				52200															
SAN JOAQUIN COUNTY				52201															
04N/04E-14C01 M 08/00/65 5050	--	8.6	1010	16 .30 8	3.9 .32 3	198 3.61 88	1.5 .04 4	12 .40 4	200 3.28 34	1.0 .02 62	212 5.98 62	0.8 .01 5	--	1.6	--	568 545	56 0		
04N/05E-08H01 M 08/00/65 5050	--	7.7	5180	256 12.77 25	192 15.78 21	495 21.53 43	2.0 .05 3	0.0 .00 0	340 5.58 11	9.0 .19 89	1640 46.25 89	1.8 .03 5	--	.8	--	3840 2763	1430 1152		
04N/06E-11P01 M 08/00/65 5050	--	7.8	225	19 .95 40	9.8 .81 34	12 .52 22	3.0 .08 3	0.0 .00 0	121 1.98 85	6.0 .12 5	7.3 .21 9	0.9 .01 2	--	.0	--	527 117	88 0		
04N/07E-23B03 M 08/00/65 5050	--	7.5	228	16 .80 34	8.5 .70 30	18 .78 33	2.4 .06 3	0.0 .00 0	112 1.84 81	1.0 .02 1	13 .37 16	3.3 .05 2	--	.0	--	201 117	75 0		
03N/06E-27B02 M 08/00/65 5050	--	8.5	319	30 1.50 45	12 .99 30	16 .70 21	4.2 .11 3	5.0 .17 5	154 2.53 76	10 .21 6	8.5 .24 7	10 .16 5	--	.0	--	229 171	124 0		
03N/07E-11G01 M 08/00/65 5050	--	8.2	187	14 .70 37	6.3 .52 27	14 .61 32	2.7 .07 4	0.0 .00 0	90 1.48 80	6.0 .12 7	6.2 .17 9	4.6 .07 4	--	.0	--	172 98	61 0		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH MCH		
03N/08E-08E01 M 08/00/65 5050			--	8.3	167	11 .55 33	4.7 .39 23	16 .70 42	1.5 .04 2	2.0 .07 4	73 1.20 75	1.0 .02 1	8.6 .24 15	4.9 .08 5	--	.0	--	170 85	47 0		
02N/06E-27L01 M 08/00/65 5050			--	8.5	360	29 1.45 36	13 1.07 27	32 1.39 35	4.2 .11 3	8.0 .27 7	182 2.98 77	15 .31 8	10 .28 7	1.5 .02 1	--	.0	--	256 202	124 0		
02N/07E-14N01 M 08/00/65 5050			--	8.4	401	38 1.90 44	19 1.56 36	18 .78 18	4.8 .12 3	7.0 .23 5	218 3.58 82	9.0 .19 4	9.6 .27 6	4.7 .08 2	--	.0	--	266 217	172 0		
02N/08E-15L01 M 08/00/65 5050			--	8.0	213	19 .95 43	8.6 .71 32	9.9 .43 19	4.5 .12 5	0.0 .00 3	119 1.95 89	4.0 .08 4	3.7 .10 5	3.2 .05 2	--	.0	--	186 111	83 0		
02N/09E-07G01 M 08/00/65 5050			--	8.3	247	24 1.20 47	10 .82 32	11 .48 19	1.9 .05 2	2.0 .07 3	113 1.85 74	15 .31 12	7.0 .20 8	4.5 .07 3	--	.0	--	197 131	102 6		
01N/07W-11J01 M 08/00/65 5050			--	8.4	259	--	--	17 .74	--	4.0 .13	122 2.00	--	9.3 .26	--	--	--	--	--	90 0		
01N/04E-03N01 M 08/00/65 5050			--	8.8	1220	45 2.25 17	24 1.97 15	202 8.79 67	2.9 .07 1	33 1.10 8	428 7.02 54	9.0 .19 1	163 4.60 35	6.0 .10 1	--	1.4	--	700 696	210 0		
01N/06E-04D01 M 08/00/65 5050			--	8.5	358	16 .80 20	5.8 .48 12	60 2.61 66	1.7 .04 1	5.0 .17 4	166 2.72 69	3.0 .06 2	35 .99 25	0.3 .00 0	--	.2	--	258 208	64 0		
01N/06E-10P01 M 08/00/65 5050			--	8.4	2660	107 5.34 21	49 4.03 16	368 16.01 62	22 .56 2	4.0 .13	146 2.39 9	1.0 .02	835 23.55 90	1.6 .03	--	.9	--	1670 1460	470 344		
01N/07E-12C01 M 08/00/65 5050			--	8.2	158	--	--	4.4 .19	--	0.0 .00	76 1.25	--	2.6 .07	--	--	--	--	--	67 5		
01S/04E-14W01 M 08/00/65 5050			--	8.6	1460	29 1.45 10	16 1.32 9	266 11.57 80	5.2 .13 1	14 .47 3	230 3.77 27	236 4.91 35	176 4.96 35	1.7 .03	--	2.1	--	896 859	138 0		
01S/05E-10H02 M 08/00/65 5050			--	8.4	800	43 2.15 26	31 2.55 31	79 3.44 42	2.1 .05 1	4.0 .13 2	172 2.82 34	57 1.19 14	145 4.09 50	2.0 .03	--	.1	--	512 447	234 87		
01S/06E-04A01 M 08/00/65 5050			--	8.5	2150	184 9.18 44	54 4.44 21	162 7.05 34	3.2 .08	10 .33	168 2.76 13	28 .58 3	600 16.92 82	0.6 .01	--	.2	--	1660 1124	680 526		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAH FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER							
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	R	SI02	TDS SUM	TH NCH
01S/C7E-1CA01 M 08/00/65 5050			--	8.3	267	27 1.00 37	9.5 .78 29	20 .87 32	3.1 .08 3	2.0 .07 3	123 2.02 75	10 .21 8	12 .34 13	3.6 .06 2	--	.1	--	206 141	89 0
01S/C4E-08F01 M 08/00/65 5050			--	8.4	229	16 .90 35	7.8 .64 28	18 .78 34	2.8 .07 3	4.0 .13 6	88 1.44 63	10 .21 9	12 .34 15	9.2 .15 7	--	.1	--	203 123	72 0
02S/C4E-01F01 M 08/00/65 5050			--	8.4	614	27 1.35 23	7.9 .65 11	87 3.78 65	1.2 .03 1	4.0 .13 2	100 1.64 28	128 2.66 45	48 1.35 23	4.2 .07 1	--	.5	--	386 357	100 12
02S/C4E-36P01 M 08/00/65 5050			--	8.5	1280	54 3.19 25	34 2.79 22	150 6.79 53	3.0 .08 1	8.0 .27 2	158 2.59 21	277 5.76 46	129 3.64 29	11 .18 1	--	1.3	--	628 761	298 155
02S/C5E-22C01 M 08/00/65 5050			--	8.3	1330	72 3.59 27	34 2.79 21	152 6.61 51	3.7 .09 1	4.0 .13 1	144 2.36 18	198 4.12 32	218 6.15 47	14 .23 2	--	1.2	--	844 767	320 196
02S/C5E-22P01 M 08/00/65 5050			--	8.1	2030	127 6.34 31	66 5.43 27	178 8.61 42	2.2 .06 0	0.0 .00 0	278 4.56 22	235 4.89 24	366 10.32 51	33 .53 3	--	1.8	--	1330 1165	590 362
02S/C5E-29D01 M 08/00/65 5050			--	8.4	869	62 3.09 35	18 1.48 17	88 3.83 45	2.8 .07 1	6.0 .20 2	160 2.62 32	90 1.87 23	117 3.30 40	15 .24 3	--	1.5	--	560 479	230 89
02S/C0E-20J05 M 08/00/65 5050			--	8.5	1450	59 2.94 22	28 2.30 17	192 4.35 61	3.2 .08 1	8.0 .27 2	154 2.53 19	134 2.79 21	280 7.90 58	1.4 .02 0	--	.6	--	888 782	264 124
02S/C7E-20R01 M 08/00/65 5050			--	8.5	438	45 2.25 48	13 1.07 23	30 1.31 23	3.5 .09 2	7.0 .23 5	179 2.94 64	26 .54 12	16 .45 10	25 .40 9	--	.1	--	320 253	167 9
02S/C5E-08F01 M 08/00/65 5050			--	8.4	816	66 3.29 41	17 1.40 18	73 3.18 40	2.7 .07 1	8.0 .27 3	140 2.30 30	91 1.89 24	94 2.65 34	38 .61 8	--	.8	--	548 459	235 107
02S/C5E-14D01 M 08/00/65 5050			--	8.0	1390	103 5.14 39	22 2.63 19	133 5.79 42	2.8 .07 1	0.0 .00 0	164 2.69 20	192 3.99 30	220 6.20 47	23 .37 3	--	.7	--	908 787	390 256
03S/C5E-26V01 M 08/00/65 5050			--	8.2	1320	88 4.39 32	39 3.21 23	139 6.05 44	2.8 .07 1	0.0 .00 0	106 1.74 13	435 9.05 67	78 2.20 16	28 .45 3	--	1.0	--	988 863	378 291
02S/C5E-25U01 M 08/00/65 5050			--	8.2	1090	80 3.99 32	21 2.55 21	132 5.74 46	2.8 .07 1	0.0 .00 0	156 2.56 21	352 7.32 61	58 1.64 14	27 .43 4	--	1.1	--	868 760	328 200

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STATE WELL NUMBER DATE TIME LAB SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER								MILLIGRAMS PER LITER						
				PERCENT REACTANCE VALUE														
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH	
03S/C6F-07F01 M 08/00/65 S050	--	8.1	1750	83	36	230	2.4	0.0	216	182	332	22	--	1.7	--	1100	355	
				4.14	2.96	10.01	.06	.00	3.54	3.79	9.36	.35	--	--	--	995	178	
03S/C6E-22001 M 08/00/65 S050	--	7.8	671	50	1.7	69	1.9	0.0	195	114	34	12	--	.5	--	438	196	
				2.50	.14	3.00	.05	.00	3.20	2.37	.96	.19	--	--	--	379	36	
				44	2	53	1		48	35	14	3						
SURPRISE VALLEY				60100	LAHONTAN REGION								60000					
46N/16F-14H01 M 08/17/65 S050	55.0F	8.5	316	34	5.6	20	4.4	5.0	117	22	15	1.6	--	.1	--	226	108	
				1.70	.46	.87	.11	.17	1.92	.46	.42	.03	--	--	--	155	4	
46N/16E-25L01 M 08/17/65 S050	56.0F	8.0	588	54	15	28	4	6	64	15	14	1	1.6	.7	--	--	10	
				--	--	131	--	7.0	285	--	20	--	--	--	--	0		
45N/16E-17001 M 08/17/65 S050	62.0F	8.5	281	--	--	9.7	--	3.0	158	--	2.8	--	--	--	--	--	127	
				--	--	.42	--	.10	2.59	--	.08	--	--	--	--	0		
45N/16F-19001 M 08/17/65 S050	66.0F	8.6	347	30	9.5	31	--	4.0	180	--	4.7	--	--	--	--	--	110	
				1.50	.70	1.35	--	.27	2.95	--	.13	--	--	--	--	0		
44N/16E-06E02 M 08/17/65 S050	77.0F	8.8	730	--	--	154	--	16	247	--	75	--	--	5.4	--	--	13	
				--	--	6.70	--	.53	4.05	--	2.12	--	--	--	--	0		
43N/16F-20L01 M 08/15/65 S050	65.0F	8.6	290	--	--	62	--	5.0	150	--	1.9	4.1	--	--	--	--	19	
				--	--	2.70	--	.17	2.46	--	.05	.07	--	--	--	0		
42N/16E-23M03 M 08/20/65 S050	64.0F	9.6	342	29	6.2	38	0.7	7.0	179	5.6	3.3	11	--	.1	--	200	98	
				1.45	.51	1.65	.02	.23	2.94	.12	.09	.18	--	--	--	189	0	
42N/16E-06F02 M 08/15/65 S050	48.0F	7.3	322	40	14	45	1	6	43	3	3	5	--	--	--	--	141	
				--	--	11	--	0.0	188	--	1.6	--	--	--	--	0		
42N/16E-21L01 M 08/17/65 S050	50.0F	8.5	250	--	--	22	--	2.0	135	--	0.9	--	--	--	--	--	78	
				--	--	.96	--	.07	2.71	--	.03	--	--	--	--	0		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER	TEMP	LAD-PH FLD-PH	BC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
42N/16E-34F01 M 08/15/65 5050	58.0F	8.4	350	--	--	62 2.70	--	3.0 .10	207 3.39	--	3.3 .09	--	--	--	--	50 0			
41N/16E-04G01 M 08/12/65 5050	54.0F	8.6	264	25 1.25 45	7.4 .61 22	20 .87 31	1.5 .04 1	5.0 .17 6	151 2.48 92	0.5 .01 1	0.9 .03 1	0.6 .01	--	.0	--	166 135	93 0		
41N/16E-25C03 M 08/15/65 5050	56.0F	8.4	192	--	--	34 1.48	--	1.0 .03	84 1.38	--	3.8 .11	--	--	--	--	19 0			
40N/16E-11G01 M 08/15/65 5050	51.0F	8.4	211	--	--	12 .52	--	2.0 .07	126 2.07	--	0.0 .00	--	--	.0	--	82 0			
40N/16E-13R01 M 08/15/65 5050	52.0F	8.5	225	--	--	10 .44	--	4.0 .13	130 2.13	--	0.0 .00	--	--	--	--	90 0			
40N/16E-36F01 M 08/15/65 5050	56.0F	8.5	301	--	--	21 .91	--	6.0 .20	166 2.72	--	0.5 .01	5.1 .08	--	--	--	114 0			
40N/17E-20C01 M 08/15/65 5050	55.0F	8.4	380	--	--	40 1.74	--	4.0 .13	130 2.13	--	20 .56	--	--	--	--	84 0			
39N/17E-05C01 M 08/15/65 5050	66.0F	8.4	416	12 .60 15	0.5 .04 1	73 3.18 82	3.0 .08 2	4.0 .13 4	93 1.53 49	67 1.39 44	2.8 .08 3	0.3 .00	2.6	.7	--	270 211	32 0		
37N/13E-20G01 M 08/13/65 5050	--	8.5	2630	128 6.39 21	121 9.95 13	300 13.05 44	23 .59 2	18 .60 2	381 6.25 21	564 11.73 39	403 11.36 38	16 .26 1	--	.2	--	2000 1760	816 474		
35N/14E-24G02 M 08/12/65 5050	--	--	295	--	--	46 2.00	--	--	--	--	--	--	--	--	--	53			
35N/16E-18C01 M 08/13/65 5050	57.0F	--	1040	--	--	206 3.96	--	--	--	--	--	--	--	--	--	135			
35N/10E-19F01 M 08/13/65 5050	53.0F	--	324	--	--	67 2.91	--	--	--	--	--	--	--	--	--	28			
34N/14E-15H01 M 08/13/65 5050	--	8.3	254	22 1.10 39	11 .90 22	16 .70 25	4.4 .11 4	0.0 .00	153 2.51 90	5.4 .11 4	3.9 .11 4	4.2 .07 3	--	.1	--	184 142	102 0		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLER			TEMP	LA8-PH FLD-PH	BC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
						MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
34N/14E-22A01 M 08/13/65 5050			--	8.3	246	22 1.10 41	11 .96 36	13 .57 21	2.9 .07 3	0.0 .00	155 2.54 92	2.5 .05 2	4.8 .14 5	1.0 .02 1	--	.1	--	--	156 134	103 0	
34N/15E-21L01 M 08/13/65 5050			--	--	134	--	--	21 .91	--	--	--	--	--	--	--	--	--	--	--	20	
HONEY LAKE VALLEY																					
31N/12E-13M01 M 08/10/65 5050			--	8.0	234	18 .90 35	8.3 .68 26	19 .83 32	6.6 .17 7	0.0 .00	127 2.08 93	2.8 .06 2	8.7 .25 10	6.7 .11 4	--	.0	--	--	170 132	79 0	
31N/12E-25G01 M 08/10/65 5050			--	8.6	346	38 1.90 46	22 1.81 44	8.8 .38 9	7.4 .01	8.0 .27 7	220 3.61 87	1.0 .02	3.9 .11 3	7.2 .12 3	--	.0	--	--	219 197	186 0	
31N/12E-25G03 M 08/10/65 5050			55.0F	--	3360	278 13.87	191 15.72	--	--	--	--	--	520 14.66	975 15.70	--	--	--	--	--	1480	
30N/12E-23N02 M 08/10/65 5050			--	--	304	--	--	28 1.22	--	--	--	--	--	--	--	.2	--	--	--	88	
29N/12E-04G01 M 08/10/65 5050			77.0F	8.3	749	14 .70 11	1.0 .08 1	128 5.57 37	2.8 .07 1	0.0 .00	85 1.39 22	156 3.24 51	61 1.72 27	1.7 .03	--	1.5	--	--	482 408	39 0	
29N/12E-15A01 M 08/09/65 5050			--	--	202	--	--	14 .61	--	--	--	--	--	--	--	--	--	--	--	76	
29N/13E-01N01 M 08/09/65 5050			--	--	1040	--	--	212 9.22	--	--	--	--	--	--	--	--	--	--	--	108	
29N/13E-06K01 M 08/09/65 5050			60.0F	8.4	257	17 .85 32	7.2 .59 22	25 1.09 41	5.7 .15 6	2.0 .07 3	127 2.08 31	10 .21 8	4.7 .13 5	5.2 .08 3	--	.1	--	--	216 139	72 0	
29N/13E-14G01 M 08/09/65 5050			--	--	602	--	--	104 4.70	--	--	--	--	26 .73	90 1.29	--	--	--	--	--	49	
29N/13E-34N01 M 08/09/65 5050			--	--	178	--	--	8.7 .38	--	--	--	--	3.2 .09	36 .58	--	--	--	--	--	65	

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE TIME LAB SAMPLE#	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	R	SI02	TDS SUM	TH NCH		
29N/14E-C4NC1 M 08/09/65 5050	--	--	891	--	--	198 8.61	--	--	--	--	--	--	--	--	--	--	61		
29N/14E-18RC1 M 08/09/65 5050	--	--	524	--	--	110 4.79	--	--	--	--	--	--	0.6	.6	--	--	12		
29N/14E-15A02 M 08/09/65 5050	--	8.1	1900	29 1.45 7	14 1.15 6	377 16.40 84	16 .41 2	0.0 .00	479 7.86 41	418 8.69 46	36 1.02 5	92 1.48 8	--	2.3	--	1350 1219	130 0		
29N/15E-21N01 M 08/10/65 5050	63.0F	--	842	--	--	195 8.48 1	--	--	--	--	--	--	--	.4	--	--	46		
29N/15E-30A02 M 08/10/65 5050	--	--	580	--	--	131 5.70	--	--	--	--	--	--	--	.4	--	--	42		
29N/16E-20L01 M 08/11/65 5050	--	8.3	332	6.9 .34 12	1.7 .14 5	51 2.22 76	8.7 .22 8	0.0 .00	112 1.84 64	22 .46 16	18 .51 18	4.1 .07 2	--	.2	--	230 157	24 0		
28N/12E-C9EC1 M 08/09/65 5050	--	--	205	--	--	9.8 .43	--	--	--	--	2.6 .07	27 .43	--	--	--	--	81		
28N/12E-11K01 M 08/09/65 5050	--	7.4	252	19 .95 35	7.7 .57 23	23 1.00 37	4.5 .12 4	0.0 .00	154 2.53 96	0.0 .00	2.5 .07 3	1.8 .03 1	--	.0	--	178 134	79 0		
28N/14E-02G01 M 08/10/65 5050	55.0F	--	1180	--	--	219 9.53	--	--	--	--	152 4.29	--	--	.5	--	--	130		
28N/14E-C8A01 M 08/10/65 5050	62.0F	8.6	392	7.0 .35 9	0.4 .07 2	73 3.18 85	5.9 .15 4	5.0 .17 5	186 3.05 81	7.1 .15 4	12 .34 9	3.8 .06 2	--	.2	--	292 206	21 0		
28N/14E-17H01 M 08/10/65 5050	--	--	384	--	--	44 1.01	--	--	--	--	--	--	--	--	--	--	128		
28N/17E-18K01 M 08/11/65 5050	62.0F	--	251	--	--	42 1.83	--	--	--	--	11 .31	--	--	--	--	--	28		
28N/17E-20J01 M 08/11/65 5050	78.0F	--	262	--	--	48 2.09	--	--	--	--	--	--	--	--	--	--	37		

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MILLIGRAMS PER LITER MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER						
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	R	SI02	TDS SUM	TH NCH			
27N/14E-C6C01 M 08/05/65 5050						31	8.4	11	3.4	0.0	123	1.5	6.4	30	--	.0	--	207	112			
						1.55	.69	.48	.09	.00	2.02	.03	.18	.48	--	--	--	152	11			
						55	25	17	3		75	1	7	18								
27N/14E-26E01 M 08/05/65 5050						--	--	16	--	--	--	--	6.0	--	--	--	--	--	51			
								.70					.17									
26N/15E-C3F01 M 08/05/65 5050						--	--	19	--	--	--	--	4.0	--	--	--	--	--	62			
								.83					.11									
25N/17E-21N03 M 08/10/65 5050						2.3	1.3	52	0.6	1.0	81	34	14	0.8	--	1.0	--	203	11			
						.11	.11	2.26	.02	.03	1.33	.71	.39	.01	--	--	--	147	0			
						4	4	90	1	1	54	29	16									
23N/14E-25G02 M 08/16/65 5050						56	13	18	0.4	10	165	15	12	53	--	--	--	346	192			
						2.79	1.07	.78	.01	.33	2.71	.31	.34	.85	--	--	--	252	40			
						60	23	17		7	60	7	7	19								
23N/15E-28F04 M 08/18/65 5050						45	5.6	10	3.9	4.0	166	0.0	2.8	13	--	.0	--	209	135			
						2.25	.46	.44	.10	.13	2.72	.00	.08	.21	--	--	--	166	0			
						65	14	14	3	4	87		3	7								
23N/15E-35C01 M 08/18/65 5050						14	1.4	55	5.6	0.0	74	0.0	42	57	--	1.3	--	284	41			
						.70	.12	2.39	.14	.00	1.21	.00	1.18	.92	--	--	--	213	0			
						21	4	71	4		37		36	28								
SOUTH TAHOE VALLEY						60501																
12N/18E-03C01 M 08/17/65 5050						5.7	0.6	2.4	1.3	0.0	36	0.2	1.0	0.8	--	.0	--	64	24			
						.43	.05	.10	.03	.00	.59	.00	.03	.01	--	--	--	33	0			
						70	5	16	5		94		5	2								
12N/14E-03F01 M 08/17/65 5050						16	2.4	5.7	0.7	0.0	73	2.3	0.0	0.2	--	.0	--	82	50			
						.80	.20	.25	.02	.00	1.20	.05	.00	.63	--	--	--	63	0			
						63	16	20	2		96		4									
NORTH TAHOE VALLEY						60502																
16N/17E-14B01 M 08/17/65 5050						--	--	10	--	0.0	141	--	6.7	--	--	--	--	182	111			
								.44		.00	2.31		.19									0
15N/16E-24A01 M 08/17/65 5050						--	--	6.6	--	0.0	125	--	2.9	--	--	--	126	82				
								.29		.00	2.05		.08									0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAH TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIEQUIVALENT PER LITER						MILLIGRAMS PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	H	SI02	TDS SUM	TH NCH		
15N/16E-25C01 M 08/17/65 5050			--	8.0	110	--	--	5.0 .22	--	0.0 .00	0.0 1.05	--	0.7 .02	--	--	--	98	43 0			
CARSON VALLEY																					
11N/19L-35C02 M 08/00/65 5050			--	8.3	123	17 .85 67	0.4 .03 2	7.7 .33 26	1.9 .05 4	0.0 .00	72 1.18 94	2.1 .04 3	0.9 .03 2	0.6 .01 1	--	.0	76 66	44 0			
11N/19E-35K01 M 08/00/65 5050			--	7.4	95	9.7 .48 55	1.7 .14 16	5.4 .23 26	1.0 .03 3	0.0 .00	55 .90 93	0.8 .02 2	1.4 .04 4	0.5 .01 1	--	.0	56 47	31 0			
11N/20E-C7M01 M 08/00/65 5050			--	6.8	148	18 .90 68	1.2 .10 H	6.2 .27 20	2.3 .06 5	0.0 .00	61 1.00 72	1.2 .02 1	3.9 .11 8	16 .26 19	--	.1	94 79	50 0			
TOPAZ VALLEY																					
09N/22E-24C01 M 08/24/65 5050			--	8.1	144	--	--	13 .57	--	0.0 .00	76 1.25	--	3.7 .10	--	--	--	98	43 0			
09N/22E-24M01 M 08/24/65 5050			--	8.3	220	--	--	16 .70	--	0.0 .00	114 1.87	--	4.0 .11	--	--	--	138	74 0			
09N/23E-20F01 M 08/24/65 5050			--	8.5	247	--	--	17 .74	--	5.0 .17	134 2.20	--	2.0 .06	--	--	--	160	95 0			
09N/23E-32A01 M 08/24/65 5050			--	7.9	299	--	--	48 2.09	--	0.0 .00	164 2.69	--	4.4 .12	--	--	--	203	49 0			
08N/23E-16F01 M 08/24/65 5050			--	8.5	277	--	--	24 1.04	--	6.0 .20	140 2.30	--	4.3 .12	--	--	--	171	91 0			
BRIDGEPORT VALLEY																					
05N/24E-25C01 M 08/24/65 5050			--	7.9	128	--	--	5.7 .25	--	0.0 .00	71 1.16	--	0.8 .02	--	--	--	88	51 0			

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER DATE LAB TIME SAMPLER			TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENT PER LITER PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SI02	TDS SUM	TH NCH		
05N/25E-28K01 M 08/24/65 5050			--	8.7	442	--	--	34 1.48	--	9.0 .30	222 3.64	--	6.6 .19	--	--	--	301	154 0			
05N/25E-28Q01 M 08/24/65 5050			--	8.4	269	--	--	20 .87	--	5.0 .17	136 2.23	--	4.2 .12	--	--	--	201	83 0			
04N/24E-13E01 M 08/24/65 5050			--	6.7	98	--	--	3.4 .15	--	0.0 .00	49 .80	--	0.0 .00	--	--	--	74	36 0			
04N/25E-04H01 M 08/24/65 5050			--	8.6	864	72 3.59 42	13 1.07 13	82 3.57 42	13 .33 4	12 .40 5	160 2.62 31	235 4.89 57	23 .65 8	1.6 .03	.3	--	631 530	233 82			
04N/25E-04F01 M 08/24/65 5050			--	8.3	2890	--	--	581 25.27	--	0.0 .00	999 16.38	--	129 3.64	--	--	--	2030	311 0			
TRUCKEE VALLEY						66700															
17N/16E-07N01 M 08/17/65 5050			--	7.4	124	--	--	4.4 .19	--	0.0 .00	61 1.00	--	6.7 .19	--	--	--	85	51 1			
17N/16E-08M01 M 08/17/65 5050			--	7.6	150	--	--	6.4 .28	--	0.0 .00	63 1.03	--	13 .37	--	--	--	102	54 3			
17N/16E-14F01 M 08/17/65 5050			--	7.4	128	--	--	3.4 .15	--	0.0 .00	79 1.30 1	--	1.4 .04	--	--	--	88	59 0			
17N/16E-16L01 M 08/17/65 5050			--	7.2	133	--	--	4.1 .18	--	0.0 .00	67 1.10	--	6.4 .18	--	--	--	112	50 0			
17N/16E-17F01 M 08/17/65 5050			--	7.0	159	--	--	6.6 .29	--	0.0 .00	72 1.18	--	12 .34	--	--	--	107	57 0			

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